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ABSTRACT

The report presents results of a study of elementary and secondary school two-way bilingual immersion programs that focused on the program and contextual factors affecting student learning, student and teacher language use in the classroom, and teaching strategies used to promote target language use and increase language proficiency. The study included a survey of 182 schools in 19 states offering two-way bilingual education (results are summarized here) and case studies of 3 elementary school programs: Francis Scott Key Elementary School (Arlington, Virginia); River Glen Elementary School (San Jose, California); and Inter-American Magnet School (Chicago, Illinois). The case studies detail program design and components, school and district characteristics, program history, learning environment, instructional strategies, teacher classroom behaviors, student language use, student outcomes, and the program's impact on the students and the school community. Contains 39 references. (MSE)

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Two-Way Bilingual Education: Students Learning through Two Languages

FINAL REPORT

by Donna Christian, Chris Montone, Isolda Carranza
Kathryn Lindholm, and Patrick Proctor

National Center for Research on Cultural Diversity
and Second Language Learning
University of California, Santa Cruz

Center for Applied Linguistics
Washington, DC

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Two-Way Bilingual Education:
Students Learning through Two Languages
Final Report

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I. Introduction

Two-way bilingual programs, also referred to as "dual language" and "two-way immersion" programs, integrate language minority and language majority students in the same classroom with the goal of academic excellence and bilingual proficiency for both student groups. In these programs, most of the language learning does not come from direct language instruction; rather, as content is learned in the non-native language, that language is also acquired. Two-way programs provide content area instruction in both the non-English and the English language for significant portions of the instructional time and aim for student academic performance at or above grade level in both languages. An additional goal of many programs is to create an environment that promotes linguistic and ethnic equality and fosters positive cross-cultural attitudes.

Two-way bilingual programs share several characteristics. They provide dual language instruction, with the non-English language typically used for at least 50 per cent of the instructional time. Students and teacher engage in periods of instruction (in content areas like math, history, biology or language arts) during which only one language is used. Finally, native speakers of both English and the non-English language (preferably in balanced numbers) work together in the classroom for most content instruction, serving as resources for one another in both language and content.

The rationale for the basic two-way bilingual approach derives from several theoretical assumptions about content and language learning. First, content knowledge learned through one language paves the way for knowledge acquisition in the second language (Hakuta and Gould, 1987; Krashen, 1991; Lambert and Tucker, 1972; Swain and Lapkin, 1985; Tucker, 1990; Collier, 1992). Studies on a variety of bilingual education program models have shown that when native language instruction is provided with balanced second language support, students can achieve academically at higher levels in the second language than if they had been taught in the second language only. Thus, students who learn content in one language can be expected to demonstrate content knowledge in the second language, as they acquire the language skills to express that knowledge.

Second, researchers in bilingual education suggest that a second language is best acquired by language minority students after their first language is firmly established (Cummins, 1984; Hakuta, 1987; Hakuta, 1990a; Snow, 1987). Development of literacy in a second language appears to occur more slowly if the student's first language literacy is weak or nonexistent. As native language literacy develops, it is believed that literacy skills transfer more easily to the second language, although recent research indicates that the transfer of skills is not as straightforward as once assumed (Snow, 1994). Additive bilingualism is attained when the ethnic, minority language is maintained along with the prestigious national language and high-level skills are developed in both languages.

Moreover, in addition to benefiting language minority children, language majority children (those who are fluent speakers of the high status language in the society, i.e., English in the U.S.) benefit from an immersion experience for language learning and do not suffer academically when instruction is provided via a second language (Harley, Allen, Cummins and Swain, 1990).

Third, it has become increasingly evident over the decades since the first Canadian language immersion programs in the 1960s that language is learned best when it is the medium of instruction rather than the goal of instruction (Brinton, Snow, and Wesche, 1989; Chamot and O'Malley, 1994;

Crandall, 1987; Genesee, 1987; Harley, et al., 1990; Lambert and Tucker, 1972; Met, 1991; Mohan, 1986; Olsen and Leone, 1994; Snow, Met, and Genesee, 1989; Spanos, 1990). Children who learn language as they work on academic tasks engage in purposeful discourse within meaningful contexts. In other words, students explain, describe, solve problems, and ask and answer questions about social studies, math, science and so forth. In immersion settings, students learn language while learning content because there is a real need to communicate while engaged in content-related tasks. These students tend to learn language better than those who study the language *qua* language alone.

Finally, sociocultural theory, developed largely out of the work of Vygotsky, also plays a role in understanding the rationale for the two-way bilingual approach. Sociocultural theory holds that language acquisition—as all learning—occurs through social interaction within an immediate social context. Meaningful linguistic input is transmitted to the child during interaction with more experienced speakers. Similar processes appear to be involved in the acquisition of a second language and this feature is built into two-way bilingual classrooms, since students have ongoing opportunities to interact with fluent speakers (both teachers and peers) of the language they are learning. Two-way bilingual classrooms, then, present a facilitative sociocultural context for learning for both language minority and majority students. From an institutional perspective, it offers an additive bilingual environment in its program design and classroom organization; from an interpersonal perspective, it offers opportunities for meaningful interactions with fluent speakers of the languages being learned and close contact with members of diverse cultural groups.

While there has been considerable research on second language education in a variety of settings (Collier, 1992; Genesee, 1987; Hakuta, 1990a; Olsen and Leone, 1994), there has been relatively little study of these processes in two-way programs, where students can continue to develop their native language as well as benefit from peer interaction with fluent speakers while learning a second language. Further, since most two-way programs are relatively new, there has been little opportunity to compile and synthesize the experience that is being gained.

Research Goals

Given the unique feature of two-way bilingual classrooms—the presence and availability of native speakers of both languages of instruction among the students—our research on two-way bilingual immersion programs has attempted to address the following questions regarding institutional and interpersonal factors conducive to two-way program success:

> *Institutional Factors*
> (1) What programmatic effects are there on the students participating in the programs in terms of gain in English language proficiency, gain in non-English language proficiency, and achievement gain in content areas?
>
> (2) How do program variations and contextual factors affect student results?
>
> *Interpersonal Factors*
> (1) How are the two languages of the classroom used by students and teachers in various situations?
>
> (2) What strategies do teachers employ to facilitate target language use and development among students (both as native language and as second language)?

(3) What strategies do teachers use to make content accessible to students with diverse levels of proficiency in the language of instruction?

(4) What factors of program structure and classroom language use seem to contribute to language proficiency levels of students?

This descriptive study presents qualitative data meant to complement extant studies of these programs which have focused largely on evaluation of outcome data rather than on the actual learning environment and activities in the classroom. The following sections summarize the procedures and findings of the research undertaken. (Appendix A lists the publications and presentations that have reported on the study.)

Methodology and Findings

PHASE ONE: Surveys

Procedures. For the past four years, we have compiled information about two-way bilingual programs as they are currently being implemented and evaluated and have conducted in-depth case studies of several programs.

We began contacting schools and districts to locate two-way bilingual programs in 1991. Information was solicited from each program identified on seven areas of interest: location and contact information, background information, program and student demographics, instructional approach and design, program staff and professional development, evaluation and additional commentary. Using the information gathered, profiles of each program were produced. These profiles were compiled into a directory for the 1991-1992 academic year (Christian and Mahrer, 1992), and supplements were added for 1992-1993 (Christian and Mahrer, 1993), and 1993-1994 (Christian and Montone, 1994). A revised and updated version of the complete directory was published in 1995 (Christian and Whitcher, 1995).

Findings. *Distribution of Programs.* By 1995, at least 182 schools in 19 states were implementing two-way programs. (See Table 1.1.) Most of these programs are found at elementary grade levels (149 of the 182 schools) (See Table 1.2.) Nearly all two-way programs use Spanish and English as languages of instruction (167 schools); other languages of instruction include Cantonese, Korean, Russian, Arabic, Japanese, Portuguese, French and Navajo. (See Table 1.3.) The majority of programs (about two-thirds of the schools) are relatively new (less than six years old) (See Table 1.4.), not a surprising fact when one compares these figures with a 1987 study that identified only 30 two-way programs in operation (Lindholm, 1987). Clearly, interest in two-way bilingual programs has increased dramatically in recent years.

TABLE 1.1
Two-Way Bilingual Programs by State

State	*Number of Schools*	*Number of Districts*
Alaska	1	1
Arizona	4	8
California	31	58
Colorado	2	5
Connecticut	3	3
District of Columbia	1	1
Florida	2	6
Illinois	3	12
Massachusetts	8	13
Michigan	2	2
Minnesota	1	1
New Jersey	2	2
New Mexico	1	1
New York	28	49
Oregon	1	3
Pennsylvania	1	1
Texas	5	9
Virginia	3	6
Wisconsin	1	1
TOTAL	**100**	**182**

TABLE 1.2
Grade Levels Served in Two-Way Bilingual Programs

Grade Levels Served	*Number of Schools*
Pre-K/K	8
K - 6	141
K - 8	14
K - 12	2
6 - 9	16
9 - 12	1
Total	**182**

TABLE 1.3
Languages of Instruction in Two-Way Bilingual Programs

Languages of Instruction	*Number of Schools*
Spanish/English	167
Korean/English	4
French/English	2
Navajo/English	2
Cantonese/English	2
Chinese/English	1
Arabic/English	1
Japanese/English	1
Russian/English	1
Portuguese/English	1
Total	182

TABLE 1.4
Year of Establishment for Two-Way Bilingual Programs; 1963-1994

Year established	Number of schools	% of total
1989-1994	137	75
1984-1988	21	12
1979-1983	10	5
1974-1978	5	3
1969-1973	6	3
1963-1968	3	2
TOTAL	**182**	**100**

Variability in Implementation. Descriptive information about existing two-way programs in the U.S. collected for this project indicates that the programs are structured in a number of different ways. They include both neighborhood-based programs and magnet schools that attract students from throughout a district. Some are programs or strands within a school, while others involve the whole school. Further, programs begin at different stages of educational development—pre-K, kindergarten, first grade, upper elementary, middle, and secondary schools—and continue, in some cases, through secondary school. In nearly all cases, participation is voluntary and parents choose to enroll their children in the program.

Although most programs share similar goals, their designs vary considerably (Christian, 1994). Most programs try to achieve balanced numbers of language majority and language minority students in the classroom so that each group can serve as a resource to the other in the language being learned. Schools try to avoid having language majority students out-number language minorities because such a situation can lead to greater in-school use of English, which is already reinforced by exposure outside the school. In the programs profiled in this project, student ratios (majority/minority language background) typically range from 50-50 to 33-67.

The ratio of instructional time in each language also varies. There are two major patterns followed in elementary schools (where the vast majority of programs operate). In one, the target non-English language is used in the early years for nearly all of the instruction (80-90 per cent) and English is introduced and gradually increased as a medium of instruction to roughly 50 per cent by the upper elementary grades. This is referred to here as the "90-10" model. In programs that follow this model, the language majority students have an immersion experience in the second language, while the minority students receive native language instruction with a gradual introduction of English and English-medium instruction.

In the second common pattern, the percentage of instruction in each language is roughly equal from the beginning. In other words, both English and the non-English language are used about 50 per cent of the time. This is referred to here as the "50-50" model. Additionally, many 50-50 two-way programs have English as a Second Language (ESL) and Spanish as a Second Language (SSL) components.

In either pattern, the distribution of the two languages may be accomplished by various means. The time for use of English or the non-English language may be defined by teacher, subject, time (divided day/alternate days/alternate weeks) or any combination of these.

Assessment of Student Achievement. To give us a sense of how students were performing academically in two-way bilingual programs, we contacted evaluators for two-way programs from across the U.S. and requested copies of their most recent reports. In total, we received 61 reports from 41 evaluators. All studies submitted were reviewed and the 35 programs with minimum levels of non-English language instruction and student integration were included in the compilation.

An overview of these evaluation reports yields generally positive findings (Mahrer and Christian, 1993). Where comparisons are possible, students in two-way bilingual programs are on the whole doing as well as or better than their fellow students in other (non-two-way) programs. Moreover, they are developing Spanish language skills far beyond those of other students, either as a first or second language, and they are working side-by-side with speakers of a language other than their own.

While these results are encouraging, there are some reasons for exercising caution in aggregating evaluation results. Programs varied considerably in their implementation of two-way bilingual education, as well as in what data were collected and how they were reported. In considering Spanish language proficiency, for example, we received reports on numerous different tests, with a myriad of other variations in implementation and measurement involved.

Another cross-cutting factor relates to the process of language development. Research has shown that language learning is a long-term process and second language proficiency may take five to seven years to develop (see Collier, 1992), particularly when academic repertoires are involved. As a result, short-term outcomes may not reflect the full potential of dual language programs. Students in the first year or two of a two-way program may not demonstrate mastery of all grade-level skills in both languages. Further, since some programs admit new students at each grade level, newcomers may be included in the evaluation data for every grade. Thus, results in the early years may reflect the fact that most students are in early stages of second language development. Results from higher grades may include numbers of students who have not had the benefit of a two-way program in earlier years; they may not be at the same level of second language development and they may have a weaker educational background overall.

Despite these cautions, however, positive trends emerge. Spanish-background students maintained or increased their Spanish language proficiency. In many programs, fluent English-speakers also maintained or increased their English proficiency and increased their proficiency in Spanish. Students classified as limited English proficient (LEP) when they began the program made progress in English and Spanish reading, although in several cases students performed below grade level. Students classified as English proficient (EP) when they entered the program demonstrated a range of achievement levels in both English and Spanish reading with a number of gains and declines in post-test scores. In English reading, however, many students performed above grade level. In Spanish math, LEP students increased their achievement levels, and in several cases performed at or above grade level. In English math, LEP students exhibited both gains and declines in their post-test scores with some students scoring at or above grade level and others scoring below. EP students increased their achievement in Spanish math. In English math, EP students showed post-test gains and declines, but a number of students scored at or above grade level.

PHASE TWO: Case Studies of Effective Programs

Methodology. In attempting to identify practices of successful programs, the project conducted case studies of two-way programs at elementary schools with relative longevity in using the two-way bilingual approach (seven or more years) and with records of academic success. The programs selected are geographically diverse and represent the major variations in two-way program design ("90-10" and "50-50"—see previous section). The project sought to identify the administrative and instructional practices believed to contribute to the success of the program. Also, several successful students were observed so as to compile a profile of effective student behavior within a two-way immersion setting. In addition to descriptive information provided by the schools, case study data included classroom observations, interviews with teachers and staff, a teacher questionnaire, and student performance measures.

Case studies were undertaken at three sites. At two sites, data were collected over two academic years, with multiple observation periods and student data. In the remaining site, the case study was more limited in scope, relying on a single 3-day visit for observations and interviews and student data for one academic year only. These case studies are described in the following sections.

II. Francis Scott Key Elementary School, Arlington, Virginia

Program Overview

The two-way bilingual education program in Arlington, VA is called a two-way "partial immersion" program. It was established at Francis Scott Key Elementary School in Arlington, Virginia in 1986, with a first grade class, and one grade has been added each year as the initial cohort advanced, along with a kindergarten. Grades K through 5 are offered at the elementary school; when students move on to the middle school in sixth grade, they may continue the program through grade 8, and on into high school at grades 9 and 10. The program has become very popular district-wide and two other elementary schools began to offer a similar plan of instruction in 1992.

In the elementary Key School program, each class contains both native Spanish speakers and native English speakers, as well as a few who speak another language natively. Instruction is conducted approximately 50 percent in English and 50 percent in Spanish throughout the grades. The students change language of instruction at mid-day. In a few classes, a bilingual teacher teaches the same class all day, using English for half the day and Spanish for the other half. Most classes work with two different teachers, one who teaches in Spanish and one who teaches in English, and students change classrooms when it is time to change languages each day. The choice of language of instruction for different academic subjects varies from grade to grade. Social studies is taught in Spanish in grades 1 to 3, but in English in grades 4 and 5, for example.

The goals of Key's partial immersion program[1] are primarily academic and linguistic. The program aims to provide students with an education as good as or better than they could have received only through English. At the same time, it attempts to provide students with a strong background in the use of Spanish to ensure the development of a high level of proficiency. The program also aims to encourage positive cross-cultural attitudes and behaviors, and high levels of self-esteem. The goals are the same for all children in the program, but the rationale is different for the two major language groups.

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[1] The school district's term for the program will be used in this section.

Data Collection for Case Study

We conducted classroom observations at three points—fall, winter, and spring—during both the 1993-1994 and 1994-95 academic years. In each site visit, a full day was spent in each of the three target classrooms of 1st, 3rd and 5th grades (Year 1) and 2nd, 4th and 6th grades (Year 2), for a total of nine visits in that academic year. (See Table 2.1.) (The elementary school program is continued at Williamsburg Middle School for grades 6-8. Observations of the 6th grade class took place there.)

Table 2.1
Key School Observations (1993-95)

Year/Visits	Fall	Winter	Spring
1993-1994	Grades 1,3,5	Grades 1,3,5	Grades 1,3,5
1994-1995	Grades 2,4,6	Grades 2,4,6	Grades 2,4,6

These classroom observations provided ethnographic data on the environment and interactional behavior of teachers, students and other participants. The classroom observations focused on aspects of the learning environment, strategies used for developing literacy and proficiency in both languages, strategies for negotiating meaning, and teachers' and students' language use.

In addition, six focal students in each class, three Spanish-background and three English-background students, were observed more closely, to obtain data on their oral participation in the classroom, both in student-student and student-teacher interactions. For these purposes, a teacher observation form and a focal student observation form were developed to record the language and other behaviors of each (shown in Appendix B).

Student data, including writing samples, assessments of oral language proficiency, and various test scores, were obtained at the end of the school year. The available English and Spanish proficiency assessments were obtained using the Student Oral Proficiency Rating (SOPR), a teacher rating scale, and Language Assessment Scales (LAS).

Interviews were conducted with the principal, the program coordinator (1), teachers (9) and teacher aides (2) in the focal classrooms (protocols are given in Appendix C). Four teachers also completed a written questionnaire (shown in Appendix D). The principal was interviewed in the first year only; the program coordinator was re-interviewed in the second year in order to collect information on significant changes to the program that had been implemented since the previous year.

School and District Characteristics

The Arlington County (VA) Public School District. Arlington (VA) Public Schools consists of 19 elementary schools, 6 middle schools, and 4 high schools serving a total of 17,031 children. Approximately 40% of students enrolled in Arlington Public Schools are of diverse ethnic backgrounds, with the largest single group being Hispanics, who make up 29.8% of the total student population. The district has 3,203 limited English proficient (LEP) students, or 19% of the total district elementary school population. Many of these students' second language development needs are served through English for Speakers of Other Languages (ESOL) and High Intensity Language Training (HILT) programs at all educational levels. Students at three schools (listed below) are currently involved in two-way bilingual education programs. These programs are currently educating approximately 600 students in two languages—Spanish and English.

Key School. In 1995, Francis Scott Key Elementary School had a population of 698 students from linguistically and culturally diverse backgrounds in grades K-5. Most received instruction in ESOL or HILT. Some limited English proficient students were among the Spanish language background students in the two-way immersion program.

Nearly half of Key School students were enrolled in the immersion program. In 1994-95, the program at Key consisted of four classes at kindergarten, three each at first and second grades, two each at third and fourth grades, and one class in grade five.

Key School's immersion program is open to any child in Arlington who is interested, with preference given to students in the Key neighborhood district. There is a waiting list, and students with siblings in the program are given priority for admission. The rest of the candidates are chosen randomly, taking into account such variables as grade, gender and native language.

Class Composition. In 1994-95, there were 318 students participating in the Key immersion program, 48% males and 52% females. Approximately fifty percent (50%) were bused to Key and lived outside the Key School boundaries, but within Arlington County Public Schools' district. Eighteen percent (18%) of those bused were native Spanish-speaking children, and eighty-one percent (81%) spoke English as their native language. In 1993-94, twenty-six percent (26%) of those bused were labeled as Gifted and Talented (G/T) or potential for G/T, with only ten percent (10%) of the non-bused students in the immersion classes labeled G/T. (Data on this for 1994-95 were not available.) (Barfield, 1995; Barfield & Rhodes, 1994).

Overall, there were more gifted and talented students in the immersion classes than in the regular classes. During the case study period, there were approximately 3-6 gifted students in each immersion class and 2-3 in each non-immersion class at Key School. The average class size in the immersion program was 23 students. Students may also be labeled gifted in such specific areas as art or music. (Although the program originally began as a program for gifted and talented students, it is now viewed by the school as a program for all students. In the initial stages of the program, school officials felt it necessary to label it a gifted and talented program in order to attract enough students. Today there is no trouble attracting students.)

Total African-American enrollment in the program was 4.2 percent (12 students) and total Asian was 1.4 percent (four students) This was a smaller percentage than in the school as a whole (African American 10%, Asian 5%) or Arlington Public Schools (African American 18%, Asian 10%) as a whole.

The immersion program appears to be including more students with special needs than in the past. There has been a marked increase since last year in those students participating in special education in the immersion program, which includes thirteen learning disabled children and twenty students who receive speech therapy. However, the number of children with learning disabilities and those receiving speech therapy in immersion is not as high as those in non-immersion classes.

Socio-economic status was determined by students' participation in the free and reduced lunch programs. It should be noted that this may not be entirely reliable due to the fact that participation is voluntary. Thirty-eight percent of the children involved in the partial immersion program at Key had free lunches and four percent had reduced-price lunches.

Students. Immersion class sizes range from seventeen to twenty-six students, averaging twenty-three children. While the primary grades have a fairly even distribution of native English and native Spanish speakers, as the grade levels increase, the percentage of native Spanish speakers increases as well. The reason for this is that as children leave the program, their replacements must have enough proficiency in Spanish to succeed academically. Since proficiency increases from grade level to grade level, new students entering the program in the upper grades must be fairly proficient Spanish speakers and few native English speakers in the upper elementary school grades are that proficient in Spanish. The program has started to remediate this trend by increasing slightly the number of native English speakers in the lower grades.

Program History

During the 1980's, Arlington Public Schools offered two programs for language minority students: English to Speakers of Other Languages (ESOL) classes and High Intensity Language Training (HILT) classes, which combined language and content instruction. The ESOL staff became interested in other models and innovations for educating language minority and language majority students, and during the 1985-86 school year, began to exchange information and ideas with their counterparts in the Hartford (Connecticut) Public Schools Bilingual Program Office. The Key School principal, Dr. Paul Wireman, visited Hartford to observe bilingual classrooms and upon his return decided to implement a two-way bilingual program at Key.

As is often the case in starting up a two-way bilingual program, it was easier for the Hispanic parents to understand the benefits of this innovative model and be convinced to enroll their child than it was for the English-speaking parents, but Dr. Wireman was able to attract enough parents in both groups to make it possible to begin the program with one class of first graders within the Gifted and Talented strand at the school. A search for teachers with appropriate qualifications was undertaken, and two teachers (one for the English component and another for the Spanish component) were identified.

By the end of the summer, the program was in place. Staff of the Center for Applied Linguistics agreed to provide assistance in monitoring the program, provide staff development, and prepare a program review at the end of the school year. The first of many meetings took place involving Key and CAL staff just before the school year began, and a meeting for parents was also conducted. In addition, visits were arranged for teachers and interested parents to a local bilingual program and local (one-way) immersion (second language for English-speakers) programs. As a result, staff at Key gained access to a network of local educators who were concerned with similar issues.

The Key School program has grown from one class of 18 students in 1986 to 319 students in 1995. The program is viewed by the school district as a stable program; the community views it as so successful that local parents helped start two new immersion programs in the school district in 1992. As the Key program expanded by adding one grade each year, and information about the benefits of the two language approach was understood by more Arlington residents, there was an increase in the number of parents seeking out the program. *By 1989, when the district opened enrollment to anyone in* the school district, school administrators no longer needed to recruit new parents; they were learning about the program by word of mouth and were coming to the school on their own to register their children. In fact, 1989 marked the first time there were more students interested than there were places in the program, and a waiting list was begun as an equitable way to keep track of those who would be next in line for admission. By this time, there was as much interest among non-Hispanic parents as there was among Hispanic parents.

In 1991, Arlington Public Schools received a Title VII Developmental Bilingual Education grant from the U.S. Department of Education to strengthen and expand the Key Elementary School program's capacity to serve a greater number of students, fully develop the curriculum units for all grade levels, improve instructional strategies, and provide increased teacher training. Title VII funds also contributed to the program by providing a half-time Project Specialist, adding a supplemental two-way program at the kindergarten level, providing a Spanish language arts summer school component, establishing a Parent Advisory Committee, and offering Spanish language and bilingual literacy classes to increase parent involvement.

The two-way immersion program in Arlington County expanded to two other schools—Abingdon Elementary and Oakridge Elementary—in 1992. Since that time, Key Elementary has provided guidance, assistance, and support to the administration and staff at the new sites. The program has also been extended to the middle school. In 1994-95, 50 students continued receiving instruction in Spanish in grades 6-8 at Williamsburg Middle School. The first class of immersion students is now in 10th grade, continuing their Spanish language education at Washington-Lee High School.

Because of the ever-increasing interest in Key's program, school officials decided to expand the program in the fall of 1993. Key expanded its program to include four kindergarten, three first and three second grade classes, two third grade classes, and one class each in fourth and fifth grade. These increases in school enrollment forced Key to establish a satellite site at a school building several miles away. Of the classes mentioned above, two kindergarten classes, one first and one second grade class exist at the new site (called "Key West").

In the 1995-96 school year a restructuring took place within the district. Key School is now exclusively a language program oriented school. It houses the two-way immersion students from both Key and Key West, as well as the ESOL/HILT program.

Program Design

Teachers and Staff. The immersion staff at Key School includes fourteen full-time teachers, three teacher's aides in kindergarten classes, and an immersion specialist as coordinator of the program.

This program coordinator provides academic and moral support to students, families, and teachers; disseminates information to parents and educators; and deals with public relations. She also leads the curriculum development efforts that are undertaken for the program. She makes presentations locally and nationally regarding the Key School immersion program and serves as a resource to other programs in Arlington as well as to educators from around the county and abroad.

For the seven teachers who provided information on their professional background during interviews, the average number of years of teaching experience was nine, although there was a wide range, with one first grade English teacher in her first year of teaching and a second grade English teacher with twenty-three years teaching experience. Four teachers who provide instruction in Spanish are native speakers. Four teachers have bachelor's degrees and three have master's degrees. They are certified in elementary education (five teachers), English as a second language (ESL) (three teachers), and bilingual education (two teachers). There are no formal requirements for levels of proficiency for those teachers teaching Spanish who are not native speakers. However, their language proficiency is assessed by an administrator during the interview process when they teach a sample lesson to a class.

With regard to the language skills of the English teachers, program coordinator Marcela von Vacano suggests that "it is advantageous for all teachers to be bilingual, including those who teach only in English." It can help their interactions with parents and shows the students that everyone can learn Spanish. "But even more important than the teachers actually speaking Spanish," she explained, "is their demonstration of a positive attitude toward the language and cultures represented."

Curriculum. The students in the immersion classes are expected to progress academically at the same rate as non-immersion students following the Arlington county curriculum. Overall, at all grade levels, their academic instruction is approximately 50 percent in Spanish and 50 percent in English.

Kindergarten students attend the partial immersion program for half the day, and Montessori or regular English kindergarten classes the other half of the day. In all grades science, health, and math are taught in Spanish, and social studies is taught in English. Language arts (including reading) is taught in both English and Spanish. (See Table 2.2.) Key School encourages an integrated language arts curriculum. The "special" classes (music, physical education, and library) are conducted in English.[2]

Table 2.2
Instructional Language Distribution by Subject and Grade
SP=Spanish ENG=English

Grades/ Subjects	Science/ Health	Social Studies	Math	Language Arts
Grades 1-5	SP	ENG	SP	SP/ENG
Grade 6	ENG	SP	SP	SP/ENG

The teachers use teacher-made materials in all subjects to supplement textbooks in Spanish such as *Ciencias* (Silver Burdett) or *Matemáticas* (Silver Burdett & Ginn) that follow the county curriculum. A curriculum guide (Arlington Public Schools, 1992) and units of study for the immersion program as well as a Spanish immersion language arts curriculum have been developed by Key School staff. One of the strengths of this program is the continuous development of units of study and curriculum guides.

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[2] Students in sixth grade immersion at Williamsburg Middle School have social studies in Spanish daily and language arts in Spanish every other day. The rest of their classes are in English.

The program contains ongoing and discrete forms of language assessment. The ongoing assessment instruments are student portfolios and unit tests in each subject area. The tests conducted at specific times of the school year for various grades comprise: Comparison of writing samples in English in grades 2-5 and Spanish in grades 1-5, SOPA (Spanish Oral Proficiency Assessment) in grade 2, LAS (Language Assessment Scales) in Spanish in grades 1-3, COPE (CAL Oral Proficiency Exam) in Spanish in grade 5, SOPR (Student Oral Proficiency Rating) in all grades, DRP (Degrees of Reading Power) in grades 2-5, ITBS (Iowa Test of Basic Skills) in grade 4, and Virginia Literacy Passport Test in grade 6.

Program Guidelines. The "Handbook for Teachers and Administrators," developed by the Program Coordinator, offers guidelines on instructional issues. With regard to the separation of languages, concurrent use of both immersion languages, either by consecutive translation or code-switching, is strongly discouraged. The manual states that during the Spanish time of the day "98% of the instructional time should be in Spanish" (page 7), however, it leaves room for a flexible application of this policy, especially in kindergarten and the early grades. The suggested strategies for encouraging the use of Spanish during the corresponding time of the day include: (a) establishing a reward system, (b) including English-background and Spanish-background children in the same teams, and (c) emphasizing the importance of being able to speak another language as well as English.

The Handbook encourages continuous consultation of teachers with each other in order to coordinate their teaching and reinforce the content in both languages. Teachers are instructed to work in teams and meet as often as possible. The organization of teachers' teamwork includes having contact teachers designated for different areas of the curriculum: (a) the gifted and talented program, (b) mathematics, and (c) science.

Changes in Progress. One aspect of the curriculum that teachers are beginning to take a more critical look at is the role of formal language instruction. Following the original philosophy of immersion instruction, Key teachers previously had not been explicitly teaching the patterns of grammar in Spanish. However, after noting persistent grammatical errors in both spoken and written work in Spanish, upper grade teachers have now begun to incorporate formal grammar teaching into their language arts curricula. This follows the trend in other immersion programs (Snow, 1987) to teach formal rules of the immersion language as part of the curriculum.

Another recent innovation has been that the program is currently integrating some students from the English as a Second Language (ESOL) and High Intensity Language Training (HILT) programs into classes taught in Spanish, such as reading and math, in grades 4 and 5. The immersion program also has begun including special education children in these classes. As a result, fourth and fifth grade students in 1994-95 changed classrooms to participate in multi-age reading and math classes according to their ability levels in these subjects. Thus, the immersion program today serves a more diverse group of students than it did originally.

Professional Development. Immersion program teachers receive regular in-service training. In 1993-94, teachers attended lectures on the following topics: "Research on Second language Acquisition" by Dr. Virginia Collier, "Underlying Proficiency in Second Language Acquisition" by Dr. Emma Violand-Sanchez, "Teaching Learning Strategies" by Dr. Anna Chamot and "Creating Math Centers" by Mary Helman. During 1994-95, a teacher training project funded by the National Endowment for the Humanities was carried out where 20 teachers in the immersion and other programs at Key School engaged in a comparative study of the works of Mario Vargas Llosa and Eudora Welty with a focus on developing insights into the similarities and differences between the Latino and Anglo cultures. Program teachers also attended lectures on Multicultural Literature for Children.

Learning Environment

Classroom. In the upper grade (including at the middle school) and some of the lower grade classrooms observed, the desks were often arranged in columns, sometimes in pairs forming two columns, facing the blackboard at the front of the room. In one case, pairs of students faced each other, turning their heads to the side to look at the front blackboard. In the rest of the lower grade classrooms, students were seated in groups of five or six at round or hexagonal tables. These seating arrangements reflected the degree to which teachers tended to organize students into cooperative learning groups for classroom activities.

Within the classrooms, on the whole, there were ample visual displays. Students' work was exhibited in some classrooms. In the English classrooms all displays were in English. In first and second grade there were posters about classroom rules, an upper and lower case alphabet, calendars, names of colors, plants and seeds, parts of a plant and an Author-of-the-Month display, featuring one of the students and his written work. In the back of one classroom, "mailboxes" of construction paper had been set up for each child. Other displays throughout the year were: proofreading guidelines, "I'm an American" rhyme, and lyrics to patriotic songs. In one

English classroom there were often sentences on the board with grammatical, lexical, and mechanical errors taken from student work, with the title "What's wrong?." Bookshelves were well-stocked with children's reading material in English only.

In the Spanish classrooms most displays were in Spanish (e.g., classroom rules, alphabet, months of year, number words, colors, and textbooks posters). Some displays in Spanish contained spelling inaccuracies and inconsistent grammatical forms for the same function, (e.g., using imperatives, such as *Escriba* (Write), and infinitives, such as *Escribir* (Write), in the same set of instructions). There were some books in English. Resources in the classroom included dictionaries and science texts. Homework assignments were written on the board in Spanish.

In grades 3-6, the displays on the walls reflected the use of the rooms for both Spanish and English language instruction (in three cases with the same teacher). There were, for example, science related items and composition guidelines in English and Spanish. Other resources in the room included: dictionaries (Eng.), math books (Sp.), spelling and literature books (Eng.), books on health (Sp.), a globe, and wall maps (local and national).

There were numerous lists of learning strategies, cooperative work strategies, writing process steps, and classroom rules. In one sixth grade classroom many displays were bilingual. In another Spanish sixth grade classroom there was a poster in English about grammatical categories and several charts of Spanish verbs conjugated in the indicative and the subjunctive moods. There were magazines and literature books in Spanish.

Computer resources. Key's computer lab consists of 19 Macintosh computers, nine printers, and one scanner. Software includes a site license for the Bilingual Writing Center for word processing, 10 copies of Sticky Bear Reading in English and Spanish, and about 5 CD-ROM stories in English. Individual classrooms vary in how frequently they use the computers. Some use them as often as once a week, while others use them once a month. Word processing in Spanish and English is used the most. Upper grade level classrooms (3-5) use the computers the most, often for writing up research reports, stories, or material and graphics for group projects.

Library Resources. The library contains from 17,000 to 18,000 volumes, geographically divided between Pre-K-2 materials on the lower floor and resources for grades 3-5 on the upper floor. About 5% of the school's holdings is in Spanish. The Spanish and bilingual books are integrated with the English books by subject matter, and are indicated with a sticker on the binding that reads "Spanish." About a half dozen sets of reference materials are available, mainly for the upper grade students, including encyclopedias and dictionaries. The immersion program also enjoys a larger set of materials in Spanish that were acquired several years ago through other funds dedicated specifically for this purpose and are not counted among the library's general holdings. The school has had trouble finding appropriate materials for the educational level of the students and at reasonable prices. However, the library plans to expand its Spanish-language holdings in the next couple of years.

Instructional Strategies

Separation of Languages. All teachers generally remain faithful to the separation of languages, speaking Spanish only during Spanish time and English only during English time. Even when students speak to the teacher in the other language—almost exclusively English during Spanish time—the teachers respond in the appropriate language of the time of day. If the students know how to express all or most of what they want to say in Spanish, for example, the teacher will often prompt the student for Spanish by saying something like *Cómo?* (What?). Or, she may begin to model the utterance in Spanish, which has the effect of eliciting a repetition of the utterance by the individual student in Spanish, with the teaching filling in and modeling the unknown words, conjugations, or construction. If the students do not know how to express what they said in Spanish yet, the teacher will usually model the Spanish for them, occassionally asking the individual student, or sometimes the entire class, to repeat after her.

Instructional Strategies. In the classes observed, cooperative pair or small group work was used extensively. Numerous grouping strategies were utilized, including mixed ability, mixed language background, homogeneous by reading level, and spontaneous groupings by student preference. Cooperative learning in heterogeneous (mixed language background) groups gives students an opportunity to interact in meaningful ways with peers who are fluent in the language they are learning. As a result, students have numerous language models besides the teacher, as well as experiences that help promote the social goal of fostering student respect for other cultures and peoples. In addition, they have many more chances to use the language they are learning.

In classrooms where students are learning through a language other than their mother tongue, it is essential that teachers make content clear to all students. In two-way bilingual classrooms where students are fully integrated, every session involves some students learning content through their non-native language. To this end, the teachers we observed employed a variety of strategies. Manipulatives, graphic organizers, and visual support (e.g., overhead projector, blackboard, realia, show and tell) are utilized on a daily basis, such as during an earth science lesson when third grade students use a flashlight and a ball to act out the concepts of rotation and revolution. Kinesthetic activities (e.g., mini-dramas, miming, Total Physical Response) are used frequently.

The teachers also use a variety of means to check student comprehension of language and content. One first grade teacher utilizes physical response activities to check aural comprehension during instruction in English, while her Spanish counterpart reviews each student's written work as soon as it is completed. In third grade, the teacher has students do oral presentations and then ask and answer each other's questions; thus, she can monitor the presenter's and the class' comprehension of the topic. In the upper grades, teachers rely more on student requests for clarification. Whether these clarifications are provided by their classmates or by the teacher varies according to the teacher's individual style.

Visual supports are also provided in many ways. Overhead projectors, for example, are used almost daily by many of the teachers. Those who do not use them, rely on ad-hoc posters and the blackboard. Abundant visual displays in all rooms serve as models of language, references and reinforcement. In the first grade, students are encouraged to refer to displays as models for their writing.

With regard to language strategies, teachers generally speak clearly and at a slightly slower pace in the lower grades (1-3) and during explanations of instructions or new material. This is also the case more so during Spanish instruction than during English instruction. In the upper grades, the teachers tend to speak at a natural pace. Additional strategies aim at making meaning clear and modeling language were repetition, re-phrasing, paraphrasing, and leading. Teachers also encourage students to help each other by providing answers, explanations, and modeling language forms.

Error Correction. Little explicit correction of students' linguistic errors was observed in the classrooms. Rather, teachers usually accepted student responses and either modeled the appropriate language, or re-phrased, paraphrased, or extended the student's utterance, thereby serving as a model. In some cases, the teacher would model the language and ask the student or the entire class to repeat. This is usually done with individual, unfamiliar words in isolation. Correction of written work was not observed very often, though in many cases this probably took place after school hours.

Language Input. The English-speaking teachers offer students a native speaker model of oral and written English. The first grade teacher uses a variety of idiomatic expressions. It was not clear whether the students are able to comprehend them all. The fifth grade teacher uses quite a few idiomatic expressions as well, but at that level they seem more likely to extend the students' language development, rather than impede it.

The grammatical accuracy of the Spanish spoken by teachers varies. Most teachers provide highly fluent models of Spanish, exemplifying several regional standard varieties of the language. In some cases the Spanish is noticeably influenced by American English in syntax (e.g., adjectives before instead of after the nouns they modify) and lexicon (e.g., *colectar*, which does not exist in most varieties of Spanish, for *recoger* `to collect'). One teacher exhibited some lack of grammatical accuracy and consistency. Genders of articles for nouns were often confused; the subjunctive was either not used or used inconsistently; and commands were given in the formal form sometimes and in the informal form at others. The same teacher's written language revealed misspelled words and missing or inappropriately placed accent marks. This was reflected in wall displays as well. Other Spanish teachers' displays also contained errors and at times writing was presented without accent marks, both on the walls and on the transparencies for the overhead projector. The immersion specialist was aware of the varying levels of grammatical and mechanical accuracy and stated her concern for standardizing language usage in the classrooms.

Student Language Use

Separation of Languages. The students remained faithful to the separation of languages almost always when speaking directly to the teacher and most of the times when performing academic tasks. Among all students, use of Spanish during English time was infrequent and usually limited to an occasional word or phrase. This was true even in the first grade.

In most Spanish classrooms, however, cases of students addressing the teacher in English during Spanish time were observed (especially in the lower grades) and English was used frequently in all grades whenever the teacher was not present or was not the direct addressee. When speaking among themselves, English was the predominant language in classrooms where the students did not fear being punished for using English during Spanish time. The promotion of Spanish usage through creative incentives (e.g., make-believe games in lower grades and competitions in upper grades) helped counteract this trend temporarily. English usage by all students for social purposes during Spanish time seemed to be equally preponderant in all grades.

In most cases, when teachers became aware of the students' use of the inappropriate language they issued a reminder. This was not done as often or consistently in the lower grades. The first grade teachers, for example, did little to discourage the students' use of English during Spanish time out of sensitivity to the English speakers' second language development process. The teachers' behavior, for the most part, was consistent with what they reported in interviews that they would recommend a teacher do in similar situations.

Second Language Fluency and Accuracy. The native Spanish-speaking first graders appeared to be quite comfortable with English, although in the class observed they are not required to speak much in class. The teacher usually asked for volunteers, so it is difficult to say how comfortable those non-native speakers who did not speak up were with the language. In Spanish, a few native English-speaking students achieved at very high levels, in many cases completing their assignments faster than native Spanish speakers.

All second graders appeared to be quite comfortable with English. In Spanish, advanced language learners could complete sentences. At the other end of the spectrum, a few still did not speak much in Spanish, but appeared able to comprehend oral and written Spanish. Student writing in English and Spanish still included invented spelling, perhaps more so among some native Spanish speakers. The English teacher taught language arts daily and her stated goal was to erradicate invented spelling by the end of the year.

Language arts was not taught separately from content in Spanish on a regular basis.

Among the third graders there was little difference in language groups with regard to English language fluency. Native Spanish speakers would occasionally overuse definite articles (e.g., "When you save **the** money, you can have a bargain"), or fail to invert the subject and verb in embedded questions (e.g., "I don't know **what's** ping-pong"). In general, though, errors in grammar or word order made in English by native Spanish speakers appeared to be ones that native English speakers would and did also make (e.g., omission of subject-verb inversion in embedded questions). In Spanish, the native English speakers had achieved a reasonable degree of communicative competence. Their speech was slower, more stilted, grammatically inaccurate, and peppered with English words than that of their native Spanish-speaking peers, but they could communicate basic content information. The native Spanish speakers sometimes lacked grammatical accuracy, too, but overall they were noticeably more fluent in Spanish than the native English speakers.

Among the fourth graders, it was difficult to distinguish between the Spanish-background and English-background speakers when they spoke in English. In Spanish, although they lacked vocabulary, the English speakers had a greater degree of fluency than students in lower grades. Explicit language arts instruction was provided in the 1994-95 academic year, and the students demonstrated better command of verb inflection. In addition, the students seemed to know how to use some verbs in the preterit tense. They also had begun to use object pronouns, though they did not always position them correctly in sentences. The fourth grade students' speech continued to show a number of recurring errors.

Among the fifth graders, the Spanish-background and English-background groups could not be distinguished from each other in terms of their mastery of the English language. In Spanish, although the English-background speakers still lacked vocabulary, they enjoyed a much greater degree of fluency than those in lower grades. However, their speech continued to show a number of recurring grammatical errors. (Interestingly, some Spanish-background speakers made the same errors as the English speakers in Spanish.)

The most common errors observed in students' oral Spanish were the following:

- **Word Order** (influenced by English word order)

  Grade 3
  S: *Puedo yo ver?* vs. *Puedo ver (yo)?* (Can I see?)

  Grade 4
  S: *Se hacen en dos separados cuadros?* vs. *...dos cuadros separados* (Should they be done in two separate boxes?)

- **Number Agreement Between Subject and Verb**

  Grade 2
  S: *Yo necesita* [vs. *necesito*] *más*. (I need more.)

  S: *Puedo* [vs. *puede*] *flotar en el rojo y puedo* [vs. *puede*] *flotar en el azul.*
  (It can float in the red water and it can float in the blue water.)

  Grade 4
  S: *Yo no te puse. Dónde tú la puse la tarea?*

  (I didn't put you. Where did you put it the homework?)

  Grade 6
  S: *Yo dice* vs. *Yo digo* (I say)

- **Word Choice**

  Grade 3
  S: *El fin pregunta es...* vs. *La pregunta final es...* (The final question is...)

  Grade 5
  S: **una sugestión* vs. *una sugerencia* (a suggestion)
  S: *hizo la igual célula* vs. *...la misma célula* (...the same cell)

  Grade 6
  S: *No estaba justo* vs. *No era justo.* (It wasn't fair.)

- **Gender Agreement Between Nouns and Articles**

  Grade 3
  S: *Este y este es la mismo.* vs. *...lo mismo.* (...the same)

  Grade 6
  S: *un persona* [vs. *una persona*] (a person)

- **Gender Agreement Between Nouns and Adjectives**

  Grade 4
  S: *Mi pequeño hermana.* vs. *Mi pequeña hermana.* (My little brother)

  Grade 5
  S: *nuestro tierra* vs. *nuestra tierra* (our land)

- **Use of Informal Address with Formal Title** (e.g., using "tú" when addressing the teacher as "Señora")

The principal stated, in an interview, that she would like to increase the Spanish level proficiency, and the program coordinator, noting comments by middle school Spanish teachers concerning fossilized errors, said that more explicit grammar instruction had been added to the fifth grade Spanish language arts curriculum. Further, both aides and several teachers interviewed expressed the concern that there were not enough opportunities to use Spanish during the day to ensure higher levels of proficiency, given that electives (e.g., art, music, P.E.) were in English and the students were surrounded by English when they left the school. Reflecting on the possibilities of moving toward a 90-10 model of immersion, where more Spanish is offered in the earlier grades and slowly decreases to a 50-50 ratio, the principal stated that there was strong community preference, both among English-speaking and Spanish-speaking parents, for keeping the 50-50 model the way it is.

Student Written Work. In the fall of 1993, Spanish and English writing samples were collected from the portfolios of eight focal students—four[of]in third grade and four in fifth grade. At each grade level, two native Spanish speakers and two native English speakers were targeted. In the spring of 1995, Spanish writing samples were collected for the same students and English writing samples were collected for all of the sixth graders except the two native English speakers.[3]

Analyses of focal student written essays in English and Spanish reveal that, overall, the essays are quite strong with regard to organization, which generally increases in sophistication as students pass from Grade 3 to Grade 6. Regardless of the genre or language, the essays contain a topic sentence, supporting details and a conclusion. Similarly, all of the essays are quite good from the standpoint of mechanics. Spelling errors are infrequent in each language, regardless of the language dominance of the student. The spelling errors that do appear do not seem to reflect any pattern of phonetic confusion between the two languages. This may be due to the fact that there is a great deal of overlap in the mechanics of each language. Where Spanish differs from English is where the difficulties in student work appear. Inverted punctuation, for example, is missing in all but a few essays, and accent marks are frequently missing, even in essays written by fifth and sixth grade Spanish-dominant students. In these areas, the students might benefit from some increased direct instruction.

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[3] An analysis of focal student writing at Key School was undertaken by Elizabeth Howard of Harvard University as part of this project. The full report is presented in Appendix F of this report.

With regard to linguistic errors, the native English speakers commit far more linguistic errors in their Spanish essays than they do in their English essays. In general, Spanish essays seem to consistently contain more linguistic errors then English essays. The areas in which errors occurred the most frequently mirrored those found in oral language: gender agreement between nouns and articles, gender agreement between nouns and adjectives, number agreement between subject and verb, and word order.

Code-switching, although it is quite rare, only occurs in the Spanish essays. No children use Spanish words in their English essays; however, there are occasions when both native English speakers and native Spanish speakers incorporate English words into their Spanish essays. This finding is consistent with the observations of oral language use in the classrooms. Interestingly, the code-switches in the writing samples are always flagged by quotation marks, which seems to indicate intentionality on the part of the writer.

In general, the English writing samples always seem to be of higher quality than the Spanish writing samples, regardless of grade level or native language of the student. In other words, despite receiving half of their academic instruction in Spanish, the English writing ability of the students in the program did not seem to be negatively affected in any way. The 1993-94 evaluation of the program (Barfield and Rhodes, 1994) reached a similar conclusion. Indeed, the evaluation concluded that it seemed to have had a positive effect, given that all classes in the two-way bilingual program scored higher than non-immersion classes on the county-wide assessment of English writing.

The relationship between first and second language writing ability differed for native English speakers vs. native Spanish speakers. Based on the writing samples analyzed in this study, it appears that the relationship differs according to language dominance. Perhaps because they live in an English speaking society, the native Spanish speakers tend to be more balanced bilinguals than the native English speakers. As a result, the disparities between their English essays and their Spanish essays were not as great as was the case for the native English speakers. That is, native English speakers tended to commit more errors when writing in Spanish than native Spanish speakers did when writing in English.

Specifically, there were very few instances of Spanish grammatical patterns appearing in English writing samples, while it was not infrequent to find English grammatical patterns in the Spanish writing samples. Furthermore, most instances of Spanish writing conventions appearing in English essays were produced by native Spanish speakers in the lower grade levels (i.e., students that were more Spanish-dominant).

Student Outcomes

Academic Achievement. Test results show that students in the immersion program have progressed in academic areas as well as or better than other students at their grade level. For example, in March of each year all fourth graders in Arlington Public Schools are administered the Iowa Test of Basic Skills (ITBS) in English. Subtests include vocabulary, reading comprehension, language (spelling, capitalization, punctuation, language usage), work study skills (visual, reference), mathematics (concept, problem solving, computation), science, and social studies.

The immersion students have scored significantly higher than the national average (expressed as the 50th percentile) for the past three years. As Table 2.3 indicates, the immersion students scored better than their peers in the state and county, and even better than non-immersion students at Key School. These results are especially interesting in light of the fact that the immersion students have often been studying science, social studies and mathematics in Spanish, while the ITBS is in English. It is interesting to note, however, when comparing native and non-native English speakers on the ITBS, the native English speakers overall scored higher in all seven academic areas.

Table 2.3
1995 Iowa Test of Basic Skills
Average Percentiles as Compared to a National Sample
(Fourth Graders Only)

	Lang.	Math	Reading Comprehension	Social Studies	Science
Immersion (Key)	79	93	89	86	84
Non-immersion (Key)	45	68	53	49	66
Arlington County Public Schools	71	81	74	76	79
Commonwealth of Virginia	64	66	61	65	71

Oral Language Development Outcomes. Several kinds of test data were collected on the students in Key's immersion program to assess their language development. For the past six years, the Student Oral Proficiency Rating (SOPR) has been used by teachers to assess oral language proficiency in

Spanish for all immersion students in grades K through 5. Each student is rated on five categories of oral language proficiency: comprehension, fluency, vocabulary, pronunciation, and grammar. For each category, the student is rated in one of five levels, ranging from 1, indicating little or no ability, to 5, indicating a level of ability equivalent to that of a native speaker of the language of the same age. (See Appendix E for a copy of the instrument.) Table 2.4 shows that students' oral language ability in Spanish progresses rather steadily as they continue in the program, to the point where the average score nears the possible total of 25 points by grade 5.[4] (The drop in scores from grade 2 to grade 3 may be due to the problems associated with using a single-teacher rating system that does not allow for the stabilizing effect on reliability that a multiple-rater system would provide.)

Table 2.4
1995 SOPR Scores (Spanish)

Grade	Number of students	Average Score
K	27	16.85
1	63	17.35
2	53	20.23
3	20	19.85
4	37	21.95
5	20	22.50

Despite receiving only half of their daily instruction in English, Key's immersion students are excelling in English language development. In 1994, the Language Assessment Scales-Oral (LAS-O) was used to measure the students' English language development. The LAS-O measures vocabulary, listening comprehension, and story retelling. According to the program's

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[4] Students are not formally assessed for language proficiency at the middle school; hence, no similar data are available on the sixth grade students observed in this case study.

1993-94 evaluation report (Barfield and Rhodes, 1994), the LAS-O scores indicated both native English and native Spanish speakers scored well, with 78 percent of the third graders scoring at the highest level (5), and the other 22 percent at level 4. It is also interesting to note that there were no significant differences between English- and Spanish-speaking students.

Writing Development Outcomes. All five grades focus on the writing process in both languages. Grades three through five participated in the county-wide "Assessment of Writing," along with all other third, fourth and fifth graders in Arlington County. First and second grades collected English writing samples that were graded on the same holistic county-wide scale.

In English, students wrote a paragraph writing assignment on a given topic that was scored holistically on a scale from 1 to 8. The same scale for every grade level each year. (For instance, writing assessed at level 2 is the same regardless of whether the student is in second grade or fifth grade.) In this way it is easier to demonstrate students' growth in writing as they move through the program from year to year. Two different raters rated each writing sample. Table 2.5 shows that each grade for which full data are available showed improvement in writing over the course of the year. Additionally, the average score for first graders gained one full point over the average of the previous year's first graders, and the average for the second graders increased from 3.25 in 1994 to 5.0 in 1995. Overall, the average for all grades in the Assessment of Writing in English improved from 3.70 in the spring of 1994 to 4.3 in the spring of 1995. Furthermore, immersion students in grades three through five scored higher in their individual grade levels in both the fall and spring than all other non-immersion classes, grades 3-5, with one exception.

Table 2.5
1994-95 Assessment of Writing (English)

Grade	Fall Average	Spring Average	Gain
1	N.A.	3.6	N.A.
2	N.A.	5.0	N.A.
3	2.8	4.0	1.2
4	3.2	4.9	1.7
5	3.6	4.6	1.0

In Spanish, an assessment of writing is given to immersion students in grades one through five each year and is graded along the same holistic grading scale as the English writing assessment. As Table 2.6 indicates, there were gains made in all of the grades for which there are data available from 1994 to 1995. Students appear to be writing at roughly the same levels in Spanish as in English. According to the program's evaluation report (Barfield and Rhodes, 1995), in 1995 native Spanish speakers scored significantly better than native English speakers, although there were no significant differences between limited English proficient students and non-limited English proficient students.

Table 2.6
1994-95 Assessment of Writing (Spanish)

Grade Cohort in 1993-94	1993-94 Average	1994-95 Average	Gain
1	3.00	4.88	1.88
2	3.38	N.A.	N.A.
3	4.48	5.00	.12
4	4.04	4.30	.26
5	6.15	N.A.	N.A.

Focal Student Outcomes

Available data on collected on focal students who were in the fifth grade in 1993-94 indicate that the program develops oral language skills in both languages to very high levels by third grade (Tables 2.7-2.9), with some exceptions appearing in the SOPR scores for a minority of the students. (It should be kept in mind that Student 7 entered the immersion program in third grade.) Tables 2.7 and 2.8 show that by the end of third grade, these students were determined to be very proficient in English and, on the whole, rather proficient in Spanish, as measured by the LAS-O. (Shaded boxes in the tables below indicate native Spanish speaking students; the unshaded boxes indicate native English speaking students.)

Table 2.7
LAS-O Scores (English)
At Beginning and End of Third Grade

5th Grade Focal Students	Fall 1990 Score	Fall 1990 Level	Spring 1991 Score	Spring 1991 Level
1	[illegible]	[illegible]	[illegible]	[illegible]
2	96	5	99	5
3	[illegible]	[illegible]	[illegible]	[illegible]
4	98	5	99	5
5	[illegible]	[illegible]	[illegible]	[illegible]
6	[illegible]	[illegible]	[illegible]	[illegible]
7	N.A.		99	5

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Table 2.8
LAS-O Scores (Spanish)
At Beginning and End of Third Grade

5th Grade Focal Students	Fall 1990 Score	 Level	Spring 1991 Score	 Level
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2	57	2	69	3
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	67	3	74	3
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7	N.A.		22	1

Table 2.9
SOPR Scores (Spanish)
At Beginning and End of Third Grade and End of Fourth Grade

5th Grade Students	Fall 1990 Score	 Level	Spring 1991 Score	 Level	Spring 1992 Score	 Level
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2	13	2	21	4	21	4
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
4	20	4	23	4	21	4
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
7	N.A.		5	1	20	4

With regard to writing skills, the focal students have developed strong writing skills in both languages by sixth grade. The students seem to possess a firm command of organization and mechanics (perhaps less so in the latter area in Spanish.) Code-switching is rare. Linguistic errors made in written work do not appear to be caused by language transfer, on the whole, but are typical for students passing through developmental stages in writing. (See earlier section, Student Written Work, or Appendix F for a full treatment of focal student writing ability.)

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Program Impact

The partial immersion program possess a number of qualities that are believed to contribute to its success. The following are aspects of the program mentioned in statements made by program teachers, aides, and administrators with regard to the program's strengths:

- Balanced ratio of students and teachers by language background; equal efforts to involve parents from each language background;
- Separation of languages; news bulletins in both languages; parent hotline;
- Cooperation with counterpart in English;
- Integration of ethnic groups; and
- Self-esteem; respect for bilingualism; respect for others; more content learned.

The following are summaries or quotations of evaluative statements made by program teachers and administrators with regard to the program's strengths:

- Important component for success have been the time and money that have been donated to the program by LULAC, the Comité de Padres Latinos, and other community members.
- "I definitely think it is important that everything be in Spanish in the classroom. That keeps the confusion down and stuff. And I also think that it's good for Spanish to be valued in the school, [...] 'cause lot of time they're [Spanish-background students] not proud that they know Spanish."
- "The expectations are high. We like to have our students do well and we demand a lot of work from them, and we make it in such a way that they enjoy it. So I think that the results are good because they know we expect them to work well, and they have our support. Most of them have support at home. The parents are very supportive of their work, of the program, and of the things we do and ask them to help us with."

- **The program is constantly evolving: [about bottom-up decisions and the possibilities for the teachers to experiment with improvements] "I feel good about the program because we are always at the door to see what is out there, but things are not imposed and we take a year or two to make decisions [involving the whole program]."**

Key staff and adminstration also realize the need to continually assess the effectiveness of their program. Towards that end, adjustments and innovations are periodically implemented. The following are aspects of the program mentioned in statements made by program teachers, aides, and administrators with regard to the areas of the program that could be improved:

- More Spanish input needed (especially in grades 1-2); more time and opportunities to use Spanish oral language for native English speakers;
- More Spanish language resource materials;
- Higher level of Spanish proficiency by end of 5th grade (should look closer at how students are doing after exiting and what their needs are at higher levels);
- Increased explicit language instruction (in meaningful contexts);

  [after the lessons on the past form of verbs] "They are more aware that that is one thing they need to say right; they're more conscientious about saying it right. [...] I'm going to do it next year because I see the progress, even though it's not perfect. But maybe as we get more organized and more structured, we'll see more progress." [later] "We know that academically we're doing a good job, but we know that the language that we have been teaching—because we haven't focused on the actual structures and all that—the kids are not perfect when they're speaking or writing."
- Homework support after school for students whose parents can't help them at home;

- More planning time for teachers;

  "What I would like to have is- I've been saying this- [...] `Give us some more planning time- Give us some planning time. We don't have any.'" [What time is allocated is often taken up by meetings.]

- More second language acquisition training for teachers; and

  "I'm firmly convinced that everybody in this program should have ESL background. [...] isn't it better to know how language develops?"

- Work on standardizing language use by teachers (e.g., vocabulary, accent marks, etc.).

Conclusions: Meeting the Goals and Objectives

This report presents the results of a case study of Francis Scott Key Elementary School after its eighth and ninth years of implementing a 50-50 two-way immersion model. Key teachers use a number of strategies to support first and second language development, to negotiate meaning, and to provide high level instruction. Key's commitment to professional development has created a cadre of teachers trained in appropriate instructional strategies important to the model. New and less inexperienced teachers at Key benefit from collaboration with their more experienced grade-level colleagues. The teachers and administrators are very supportive of the program and feel that it is having a very positive impact on the students' development of bilingualism and biliteracy.

Looking at these results from the perspective of the students' English language proficiency, it is clear that the English-speaking students have not suffered or lagged behind in their continued development of English language arts. The results are even more dramatic for the Spanish speakers. The Spanish speakers showed growth in English language proficiency across the grades. Observations of the focal students clearly showed that the Spanish-speaking students had acquired English and even preferred to use English in interactions with other English and Spanish speakers.

In addition, all of the Spanish-speaking students were fluent in Spanish and the English speakers made gains in Spanish oral language proficiency across the grade levels. (See Tables 2.8 and 2.9.) Classroom observations also demonstrated that, over the years, students build sufficient proficiency in Spanish to interact with the teacher and their peers during Spanish instruction. However, they showed a preference for speaking English and engaged in English whenever they had the chance.

Thus, the objective that students would be proficient in two languages was clearly met by both native English and native Spanish speakers. The students showed proficiency in all areas of development including pronunciation, vocabulary, grammar and sociolinguistically appropriate use of the language.

In content area skills, the 1995 ITBS scores show Key immersion students exceeding, on the average, their peers within the school, the district, and the state in all content areas tested.

In conclusion, the results are positive and demonstrate that the English and Spanish speakers are becoming bilingual and biliterate, with average to high levels of content area knowledge. The students, their parents and their teachers are all very satisfied with the program and the way students are learning in the program.

III. River Glen Elementary School, San Jose, California

Program Overview

The Two-Way Bilingual Immersion program at River Glen Elementary School in San Jose, California provides an immersion model for native English speakers and a bilingual maintenance model for native Spanish speakers. At the time the case study of the River Glen program was initiated, the program had been implemented for seven years. During the first year of the case study, grades 3 and 5 were selected for observation. Because the fifth-grade Spanish-section teacher had to leave midway throughout the semester and the students were taught in English, observations were not completed for the fifth grade. A total of 12 students were selected from grades 3 and 5 to observe more closely. In each class, six students were selected as the focal students: three students who had begun the program as monolingual English speakers and who had become bilingual and three students who had initially been classified as limited English proficient (LEP) and who had since acquired English proficiency. Over the second year of the case study, grades 1-6 were selected for observation. The focal students selected in year one continued to serve as focal students in year 2, although two of the students moved and did not return to the program during the second year of the case study.

Program Components

According to the River Glen model, there are 10 components that are critical to program success. The 10 components include: 1) additive bilingual environment; 2) positive and reciprocal interactive instructional climate; 3) balance in classroom composition to ensure linguistic equity; 4) administrative support including the planning, coordination, and management of the program as well as district-level support; 5) parental involvement and collaboration with the school; 6) high quality instructional personnel with native or native-like proficiency in both languages; 7) ongoing staff development; 8) optimal language input which is adjusted to the comprehension level of the language learner and yet challenging for native speakers; 9) strict separation of languages for instruction; 10) the curriculum follows district and state guidelines and integrates language and literacy objectives.

Program Goals

There are three major program goals at River Glen. The first is that students will become bilingual and biliterate at the end of seven years in the program. A second goal is that students will experience academic success by achieving at or above grade level in all subject areas. River Glen staff wants to assure that all students are academically challenged and motivated to continue to study throughout their schooling career. The third goal is that students will acquire an appreciation and understanding of other cultures, while developing positive attitudes toward themselves and their academic abilities. An outgrowth of this goal is that students will develop a sense of advocacy for themselves and for other children who speak other languages.

School and District Characteristics

The San Jose Unified School District is an urban school district located in Santa Clara County at the southern end of the San Francisco Bay in northern California. San Jose Unified is comprised of 42 schools and has a total student enrollment of approximately 31,000. In San Jose Unified's diverse district, Hispanic students make up 46% of the student body, 35% are White non-Hispanic, 14% Asian American and 4% African American. Over 7000 students are classified as Limited English Proficient and 40% of the students participate in the free/reduced price lunch program.

In 1986, as a result of a court order, the San Jose Unified School District was ordered to desegregate. As part of the desegregation plan, several of the district's 42 schools have been designated as district magnets. The current two-way bilingual immersion program at River Glen serves as a magnet school in the district. As of the 1994-95 school year, River Glen was a preschool through sixth-grade facility, with 380 students. Approximately 68% of the school's population is Hispanic, with 28.8% White non-Hispanic, 1.6% African American, 1.3% Asian American and .3% Native American. While 42% of River Glen's students are from low-income households, 75% of the native Spanish speaking but only 16% of the native English speaking students participate in the free lunch program.

The two-way bilingual immersion program at River Glen has received two awards for academic excellence: (1) The Santa Clara Glenn Hoffman Exemplary Program Award, 1989; and (2) The California Association for Bilingual Education's (CABE) Exemplary Bilingual Practices Award, 1991, for meeting the needs of language minority students. In addition, River Glen has been recognized by the California State Department of Education and the U.S. Department of Education's Office of Bilingual Education and Minority Languages Affairs (OBEMLA) as an Academic Excellence school and has received funding from OBEMLA to disseminate its two-way bilingual immersion model throughout the state and nation.

Program History

In an effort to assist in the San Jose Unified School District's desegregation efforts, River Glen's Two-Way Bilingual Immersion Program was founded in 1986 as a magnet program within the Communications Magnet Theme at the Washington Elementary School. Conceived by the Office of Bilingual Education at the California State Department of Education in 1985 following the successful San Diego model, the proposed two-way bilingual immersion model combined the most salient features of a maintenance bilingual education model for language minority students with a foreign language immersion model for language majority students. A request for interest to pilot the program was issued, resulting in the selection of five school districts: San Jose, San Francisco, Oakland, Santa Monica/Malibu and San Diego. The five districts would comprise a cooperative so that training, resources and communication would be facilitated during program planning and implementation. That same year, the Bilingual Education office in Sacramento applied for a federal Title VII Cooperative Grant to help fund the bilingual immersion cooperative in the five identified districts. The request was denied, but one year later, in 1986, the proposal was resubmitted and subsequently revised and approved to fund two-way bilingual immersion programs in San Jose, San Francisco and Oakland.

Also in 1986, the San Jose Unified School District came under court order to desegregate its schools. The district proposed a voluntary participation desegregation plan that was approved by the court and left the district under the supervision of a court-appointed Desegregation Compliance Monitor.

In order to receive desegregation funding, participating schools in the district needed to create a magnet program that would attract a range of diversity among the district's student population. Under these auspices, the two-way program was touted as an "Early Foreign Language Instruction" magnet program. In 1986, the program began with two kindergartens and one first grade classroom. Washington Elementary School was the original site of the two-way bilingual immersion Program. At this time, there were three distinct programs in operation at Washington Elementary: the English monolingual program for English speakers, a transitional bilingual program for Spanish speakers, and the two-way program.

In 1987, the program received another Title VII grant which allowed it to expand by one grade level per year until the program's space at Washington required renegotiation. In 1989, the program became a satellite of Washington and was moved from its original site near downtown San Jose, to the River Glen site in the largely middle class and Anglo English speaking Willow Glen neighborhood. Though the new site took the program out of the mostly Spanish-speaking community of Washington Elementary, native Spanish speakers' enrollment at River Glen wavered only slightly. For desegregation purposes, River Glen's enrollment was still considered part of Washington's student population as the two schools continued a collaborative relationship. At that time, Rosa Molina was hired as part-time site administrator and principal of the school. The River Glen campus also housed two community programs: the Alzheimer's Center and the Mexican-American Community Services Agency (MACSA).

By 1991, the program had grown to include grades K-6 and was serving 260 students. Both the Alzheimer's Center and MACSA had left the site and the program was able to appropriate the office area and a portable classroom for its use. Also in 1991, the program applied for and received a three-year, $175,000 Title VII Developmental Bilingual Education Grant to support preschool and middle school expansion. Additionally, a Community Development Block Grant was approved by the City of San Jose to finance a $125,000 preschool building whose construction was completed in December 1992. With the addition of this building and its component preschool program in January 1993, River Glen now has a Spanish-speaking "feeder" population for its Kindergarten instruction. Mobile classrooms have been added to the site for the library/media center and River Glen now provides child care for low-income students who attend the school.

Most recently, Cecilia Berrie started the 1994-95 school year as River Glen's new principal. Former principal Rosa Molina is still with River Glen, but now focuses her efforts on Academic Excellence and expanding the program to other schools by way of a federal grant.

Program Design

Program/Instructional Guidelines. The instructional content at River Glen is equivalent to that for students at the same grades in the San Jose Unified School District. However, since River Glen's program is a 90-10 immersion model, schedules are carefully structured to teach all required academic subjects using methods that are appropriate for both grade level achievement as well as bilingual (Spanish/English) language acquisition. To that end, Table 3.1 shows the breakdown of River Glen's language instruction.

In the 90-10 model, at kindergarten and first grade, 90 percent of the instructional day is devoted to content instruction in Spanish and 10 percent to English. Thus, all content instruction occurs in Spanish, and English time is used to develop oral language proficiency. Reading instruction begins in Spanish for both Spanish-speaking and English-speaking students. At the second and third grade levels, students receive 80-85 percent of their day in Spanish and 15-20 percent in English. As in the previous grade levels, all content is taught in Spanish. English time is spent developing oral language skills in English with the use of literature, poetry, and music. In second grade, English time is still largely spent in developing oral language proficiency, but beginning to develop academic language skills in English. Students begin formal English reading in third grade. By fourth and fifth grades, students spend 60 percent of their instructional day in Spanish and 40 percent in English. At the sixth-grade level, the students' instructional time is balanced between English and Spanish. The content areas taught in each language depend on the available curriculum materials and supporting resource materials. However, an attempt is made to assure that students are given opportunities to develop academic language in each of the major curricular areas.

Table 3.1
90-10 Program Design by Grade Level at River Glen

Grade Level	% Instruction in Spanish	% Instruction in English
Kindergarten - First	90%	10%
Second	85%	15%
Third	80%	20%
Fourth - Fifth	60%	40%
Sixth	50%	50%

The late introduction to formal English reading is an important part of the program model. The implementation of English reading instruction requires a requisite level of Spanish language literacy. Since students do not read in English until third grade, it is important to keep this in mind when examining students' achievement test scores in English.

Teacher/Staff Characteristics. The six teachers observed at River Glen (grades 1-6) came from either Spanish, English or bilingual language backgrounds. All teachers were women; four were of Latin American descent, and two were of European descent. The teachers were from diverse backgrounds and became bilingual under different circumstances. They have had social, linguistic and educational experiences in Mexico, Guatemala, Colombia, China and various states in the Union. The multicultural background of the teachers showed in their pedagogy and blended well with the diverse elements that the students themselves brought to the classroom.

All six teachers maintained extremely positive attitudes toward the program and its staff and students. They believed the program to be very effective, helping to create high social and academic standards for leadership and learning among the students.

There was a high degree of teacher turnover during the year prior to the case study and in the first year of the case study that seriously affected the experience and training levels of teachers, and which also impacted student interactions and outcomes. In the first year of the case study, there were three teachers new to the program and new to teaching. Thus, the first grade teacher preferred not to be included in the observations. Also, the fifth grade teacher left in December and a Spanish-model teacher could not be located. Thus, the fifth graders spent more than half of their fifth grade studying largely in English. At the end of that year, another four teachers left the staff. Thus, the second year of the case study involved another new set of teachers. Without the appropriate training and experience, the program had a two-year setback because of these staffing changes, largely due to staff inexperience. It should be noted that the teachers did not leave because they were dissatisfied, but because they needed to relocate to a different area or stop working due to illness or maternity leave. Another teacher moved to a new school to assume an administrative position.

Training/Professional Development of Teachers. Professional development is a high priority at River Glen. Teachers receive extensive training and professional development in a number of areas. College courses and in-service workshops were the predominant means of teacher development in topics related to Spanish language, English language, linguistics, cross-cultural communication cultural awareness, instructional methodology in Spanish and English, educational assessment and educational research. All new teachers receive training in the theory and rationale for the two-way bilingual immersion model and in second language development. Then teachers are trained in cooperative learning, educational equity, and in effective instructional techniques appropriate to promoting achievement in language arts, mathematics, science, social studies, critical thinking, and technology. Training has also included how to articulate the issues across the grade levels and has integrated follow-though activities to ensure that the issues focused on in training are implemented in the classroom. At River Glen there was also a great deal of team teaching, idea-sharing, self- and group-examination.

Learning Environment

Classroom

Classroom Environment. All of the classrooms had a variety of stimulating and colorful materials on bulletin boards and arranged around the classroom. Any language displayed in the classroom materials matched the language(s) taught in the room. Thus, if the teacher used only Spanish, then all materials were in Spanish, including all bulletin boards, posters; and books. For those teachers that split their instructional time between English and Spanish, there were bulletin board, poster and other instructional materials in the two languages and books in both languages as well. In all classes, students' work was displayed.

All teachers used cooperative group seating in their classrooms. The desks in each classroom were arranged in groups of three to six. In each seating group, the students sat at their desks side by side and facing one another. The teachers changed the populations of each cooperative learning group as they saw fit throughout the year.

Most announcements from the principal's office were made in Spanish. However, assemblies were frequently conducted in English, though they were done in Spanish when there were Spanish-speaking presenters.

Aides. The teachers worked extensively with classroom aides and would split their class into two groups when an aide was in the room. If the aides were presenting the same material as the teacher, generally the class would be split evenly. However, the aides also worked with smaller groups of students that required additional help on separate activities while the teacher presented material to the whole class.

Parent Involvement. In addition to the presence of teacher aides in the classroom, there was considerable parent involvement at the school. Parents volunteered their time to be recess and lunch monitors as well as teacher assistants.

Language. Teachers adhered strictly to the language policy of the classroom. Since River Glen follows a 90-10 immersion model, each grade level had different language requirements (see Table 3.1), but the teachers never deviated from their individual language schedules. There was also a strong emphasis on writing and creative exploration in the classroom, both in Spanish and English. Also, English and Spanish language instruction in the content areas was integrated and interrelated in the teachers' lesson plans.

Technology

Computers were used extensively in every classroom. Learning games and word processing were the most common applications, but some teachers also made combined use of the computer and overhead projector to present material and exercises. The library/media center provided large screen television sets and VCRs for educational viewing. Some classrooms in the upper grades kept such equipment in the room at all times, while other classes requested the technology for a given time period.

Library Materials

At River Glen, there is a library/media center with reference and resource materials and books in both English and Spanish. There is a strong attempt to provide materials appropriate for each grade level in the appropriate language(s). However, at the upper grade levels, the students do not have much variety in interesting reading material in Spanish. More advanced chapter books in Spanish interesting to the preteen age group are difficult to locate. Thus, students turn to English books series such as the Boxcar Children, Goosebumps, Nancy Drew, and so on.

Instructional Strategies

Teacher Discussion. Teachers at River Glen believe that their instructional strategies reflect good teaching. They use sheltering, student-teacher modeling, realia, TPR, illustrations, rephrasing to improve comprehension and develop vocabulary. It is important to present material in a fashion that students can comprehend, and since learning styles and language needs vary among students, presentation changes. Content-area instruction is influenced by a number of factors, one of which is the language needs of second language learners. But the teachers do not sacrifice content for language. Rather, they believe it is necessary to use challenging material to build the language skills of their students. Some particular strategies expressed by the teachers included:

- Never mix languages: adhere to the language schedule that has been decided upon.
- Promote a variety of activities and discussions that work to build vocabulary skills, which in turn influence the amount of information a student can take in.
- Model sophisticated language. Many teachers indicated that when a student obviously grasps a concept, but is having difficulty in verbally expressing that concept, they will re-word or rephrase their utterances for the student, so that he/she has a linguistic form to attach the concept to.

Some teachers also try to monitor their language output. They believe that their example of adhering to a specific language at specific times of day helps keep students on task linguistically.

Teacher Classroom Behaviors

Negotiation of Meaning. The teachers employed a number of means to negotiate meaning with the students. There was strong use of overhead projectors and computers. The teachers all used the blackboard, construction paper, videos, Venn diagrams, brainstorming, drama and acting as well as concrete contextual references (visuals, realia) in their lessons. In terms of language use, the teachers were very conscious of comprehensible input and used a variety of question stems and linking new vocabulary to previously learned material. Sheltering techniques were also employed, such as: simplifying the language input when necessary, reviewing the main topic and key vocabulary, checking frequently for understanding, modifying their language to the needs of the students, using rephrasing, paraphrasing and synonyms. In many instances in the lower grades, the teachers had individual students or the entire class finish sentences for them. For example,

> T: *y en nuestra jardín, podemos plantear un legumbre naranjo que crece en la tierra, que llamamos...*(and in our garden, we can plant an orange vegetable that grows in the ground, that we call...)
>
> Class: ¡*zanahorias*! (carrots)

Teachers also monitored student comprehension through interactive means such as comprehension checks, clarification requests, a variety of questioning types, paraphrasing, providing definitions, expansion, scaffolding and modeling. For example:

> T: This week we're gonna be working on a collage.
>
> Class: Collage?
>
> T: Collage, a collage is a picture made up of a lot of different things; it can be words; it can be things, it can be objects. What I want you to do is to pick one of the main characters of Charlotte's Web and, to make it a little bit easier, we're gonna brainstorm and we're going to think of ...(unintelligible). A brainstorm is where everybody gets a lot of ideas for your collage. But you're only gonna pick one--one that you wanna do. We'll do that one together and then maybe you'll get a better idea of what I want. Okay, we're gonna start with Charlotte. When you think of Charlotte in the story, what sort of things do you think about?

In the lower elementary classes, Total Physical Response (TPR) was frequently used by teachers to negotiate meaning with students. In addition to this method of comprehension and vocabulary checks, teachers across grade levels were very vigilant of their students' in-class work. When an assignment was given and work begun, every teacher walked around the class, checking student progress and offering assistance when needed. At times, the teacher needed only to walk about the room as the students worked silently. At other times, students raised their hands or formed lines waiting to discuss their work with the teacher. Whatever the case, the teacher did not resume the lesson until each student with a question had the opportunity to discuss his or her work with the teacher.

Error Correction. Teachers tended to correct student use of the inappropriate language for the time period more than they did actual linguistic errors. In the event of student linguistic errors, most teachers were likely to either let the error pass if the utterance was intelligible or simply model the appropriate expression back to the student rather than actually inform the student that his or her use of the language was incorrect. Also, when students made an error, the teachers typically focused on the content as opposed to the structure of the student's response.

T: (asking the class for words that begin with the letter 'y') *ok, ok, otro.* ¿Elena? (...another.)

E: *¿llave?* (key?)

T: *ahh, llave.*

S1: *no, llave tiene doble ele.* (no, *llave* has two 'l's.)

T: *pero tiene, pero Elena tiene razón que tiene, ¿qué?* (but she has, but Elena has a good reason to think that it has, what?)

S2: *dos ele.* (two 'l's.)

T: *gracias...fantástico, Elena, que tú fijaste que tiene sonidos casi iguales...muy bien...muy parecidos...muy parecidos.* (thank you...fantastic, Elena, that you noticed that they have almost equal sounds...very good.. very similar...very similar.)

Separation of Languages. The teachers never deviated from the language of instruction at any given period. As a consequence, the students were required to listen, understand and interact with the teacher in that language. The proficiency levels of spoken Spanish and English varied somewhat from teacher to teacher. However, all teachers had very high levels of Spanish and English proficiency.

Generally, in Spanish the teachers made use of the indicative, conditional, subjunctive, and imperative moods in their speech. Furthermore, most of the verb tenses were observed in the teachers' speech, including present and imperfect indicatives, preterit, future, conditional, present and imperfect subjunctive, imperative, and present perfect indicative tenses when speaking with individual students and to the class as a whole. The more complicated compound tenses of preterit perfect or future perfect or past perfect subjective were observed infrequently. In addition, teachers' language included conjunction and embedding.

(Future Tense)

T: *¿qué encontrará?* (what will he find?)

S1: *un bote.* (a boat.)

(Imperative)

T: *por favor, abran sus libros a la página noventa y cinco.* (please open your books to page ninety-five.)

(Imperfect)

T: *había cuestión de página...es la página ciento noventa y siete.* (there was a question about the page...it's page one ninety-seven.)

(Preterit)

T: *hubo un tormento como el otro día. ¿cómo se sintieron después del tormento?* (there was a storm like the other day. How did you all feel after the storm?)

Student Language Use

Separation of Languages. Across grade levels and in both academic and non-academic classroom situations, the speaking of English between students was generally tolerated during Spanish time. At the upper grade levels, students were expected to speak Spanish during Spanish time and teachers often requested students to use Spanish if they were using English. Students showed high levels of comprehension skills during classroom lecture, discussion and work in both Spanish and English. When students were distanced from linguistic authority and given the opportunity to choose a language, more often than not the students spoke in English at the upper grade levels.

There was some code-switching in student-student interactions. In the lower grades, students code-switched because they did not have the appropriate vocabulary or grammar. In the upper grades, though, both English- and Spanish-speaking students spoke more completely in one language or another; thus, often when they deviated from the language use rule of Spanish during Spanish time, they were making a choice to change languages.

In the lower grades, students tended to speak more consistently in the Spanish. Deviations generally came in the form of intra-sentential code switching, though these students also switched inter-sententially.[4]

SEGMENT 1 (Student-Teacher Interaction)

S: *sí, y cuando hay mucho llueve, pues tenemos* floods. (yes, and when there's a lot of rain, then we have...)

T: *sí, inundación*. (yes, floods)

S: *inundación*. (floods.)

SEGMENT 2 (Student-Teacher Interaction)

T: *diez por cinco*...(ten times five...)

S: fifty.

---

[4] Inter-sentential code switching indicates the change of language from one sentence to another (e.g., *Vamos a la biblioteca*. I need to get a couple of books. [Let's go to the library]). Intra-sentential code switching refers to the change of language within a sentence (e.g., *Vamos a la* library. I need to get a couple of *libros*).

T: *¿cómo se dice en español?* (how do you say it in Spanish?)

S: *cincuenta.*

SEGMENT 3 (Student-Teacher Interaction)

S: are these 'takeaways?'

T: *sí, restar.* (yes, subtraction.)

SEGMENT 4 (Student-Teacher Interaction)

S: I like that guy!

T: *¿cómo?* (how's that?)

S: *me gusta ése.* (I like that guy.)

SEGMENT 5 (Student-Student Interaction)

S1: what's the *respuesta*?..ok, so what's *resolver?* (...answer?...solve?)

S2: (reading from text) it's *noventa y seis menos dieciseis,* plus *dieciseis*...no, wait, thirty-six plus thirty-eight...(ninety-six minus sixteen...sixteen...)

S3: no, it's sixty-one.

S1: ok, how many *abejas* in the colony then? (...bees...)

SEGMENT 6 (Student-Student Interaction)

S1: (cleaning up after art activity) *Brenda...este es el lugar de Brenda*...open your eyes! (Brenda...this is Brenda's workplace...)

S2: (talking to S1's group) you guys, don't leave your table *mojado porque la maestra se va a enojar.* (...wet because the teacher is going to get mad.)

Fluency and Accuracy. Throughout the grade levels, in their native language, both the Spanish and English speakers maintained their fluency and gained greater accuracy in using various grammatical, vocabulary, sociolinguistic, and semantic components. The Spanish speakers who are learning English comprehend and fluently produce English with appropriate pronunciation, grammar, and vocabulary. Furthermore, they demonstrate an understanding of sociolinguistic rules during communication exchanges. The challenge for these students is in developing the higher level cognitive-academic language for literacy tasks that provide the foundation for their content instruction in English.

Among English speakers learning Spanish at the early grade levels, there is clear acquisition of comprehension skills in the first few months of the program. These comprehension skills continue to develop throughout the remainder of their participation in the program. These students also used appropriate pronunciation and simple vocabulary and grammar and they did so quite fluently. While these students were clearly able to express themselves with greater ease in the upper grade levels, their production skills showed more limited grammatical constructions and vocabulary than one would expect of a native speaker of the grade level the student was in. Almost all of these students were rated by their teachers as proficient[5] in Spanish at their appropriate grade level. The teachers and administrators felt that the fifth- and sixth-grade English-speaking students had reached a plateau in their Spanish. The students' language interactions with each other were fluid though sometimes unpredictable. At times they would provide linguistic guidance for each other, while at others they would make fun of accents or word choice.

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[5] Students' proficiency was rated by their teachers with respect to their levels of comprehension, fluency, pronunciation, grammar, and vocabulary.

SEGMENT 7

S1: *¿dónde está Juan?* (where is Juan?)

S2: él, eh, *¿cómo se dice* 'woke up late'? (he, uh,...how do you say 'woke up late'?)

S1: *se despertó tarde.* (he woke up late.)

S2: *sí.* (yes.)

SEGMENT 8

S1: (tapping his neighbor) *este va a ser blanco...va a ser blanco.* (this is going to be white...it's going to be white.)

S2: ok, ok. it looks good.

SEGMENT 9

T: *¿que encontrará?* (what will he find?)

S1: *un bote.* (a boat.)

S2: (nudges S1) *es un bote.* (it's a boat.)

S1: that's what I said, *un bote.*

S2: you said 'un botay.' (emphasizes English accent.)

S1: oh, just relax.

Regardless as to whether or not these students were breaking rules or adhering to them, they were making consistent use of both Spanish and English. While there seemed to be a disproportionate amount of English in their social language, in all grade levels, the students were able to comprehend spoken and written Spanish and English, and were able to produce meaningful, fluent language in both idioms.

Student Outcomes

Language Development Outcomes. Student outcomes regarding language proficiency is derived from the Language Assessment Scale (LAS). Table 9 presents the percentage of River Glen students classified by the LAS as Non-Spanish Proficient (NSP), Limited Spanish Proficient (LSP), or Fluent Spanish Proficient (FSP). Examination of Table 3.2 shows that all of the Spanish speakers were rated as Fluent Spanish Proficient (FSP) at all grade levels. With regard to the English speakers, the percentage of students achieving FSP status increased across grade levels, from 47 percent in first grade, to 76 percent in second grade. Among the third through sixth graders, all but one child was rated fluent in Spanish.

Table 3.3 shows corresponding Language Assessment Scale information for English oral proficiency. As Table 3.3 indicates, all of the native English-speaking students were rated as Fluent English Proficient (FEP). Among native Spanish speakers, the percent of FEP students increased from 50 percent in grade 1 to 74 percent in grade 2, 95 percent in third, and 100 percent in grades 4 through 6.

Table 3.2
Spanish LAS: Percent of Students Scoring NSP, LSP, FSP by Grade Level and Language Background

	Spanish LAS		
	FSP	LSP	NSP
First Graders			
Spanish	100%	0%	0%
English	47%	18%	35%
Second Graders			
Spanish	100%	0%	0%
English	76%	24%	0%
Third Graders			
Spanish	100%	0%	0%
English	100%	0%	0%
Fourth Graders			
Spanish	100%	0%	0%
English	94%	6%	0%
Fifth Graders			
Spanish	100%	0%	0%
English	100%	0%	0%
Sixth Graders			
Spanish	100%	0%	0%
English	100%	0%	0%

Table 3.3
English LAS: Percent of Students Scoring NEP, LEP, FEP by Grade Level and Language Background

	English LAS		
	FEP	LEP	NEP
First Graders			
Spanish	50%	23%	27%
English	100%	0%	0%
Second Graders			
Spanish	74%	13%	13%
English	100%	0%	0%
Third Graders			
Spanish	95%	5%	0%
English	100%	0%	0%
Fourth Graders			
Spanish	100%	0%	0%
English	100%	0%	0%
Fifth Graders			
Spanish	100%	0%	0%
English	100%	0%	0%
Sixth Graders			
Spanish	100%	0%	0%
English	100%	0%	0%

Analyses of writing samples for the focal students (grades 3 and 5 in Year 1 and grades 4 and 6 in Year 2) indicated that students were developing strong academic language skills in the upper grades. Since teachers had the students develop story webs and outlines, their written work tended to reflect this preliminary organization. Furthermore, there was evidence of appropriate sentence structure, spelling, punctuation, and verb tenses. In the few writing samples analyzed, students produced a few sentence embeddings and complex constructions. Furthermore, there were a variety of verb tenses reflected and there was good subject-verb agreement and adjective-noun agreement in number and gender, and distinction between the use of *ser* and *estar* (both mean 'to be' in English; these forms of 'to be' are distinguished in Spanish but not in English). The following portion of a Spanish writing sample was produced by a native English speaker in the fourth grade:

> *Empecé el cuarto grado en River Glen con la Maestra Morales. Yo no sabía que temas ibamos a aprender. Me dí cuenta que ibamos a estudiar California. Yo no sabía muchas cosas de California pero ahora sé bastante. La Misión Santa Clara es muy bonita. Queda muy cerca a San Jose. Es interesante aprender del estado en que uno vivo. Aprendí mucho de California porque hay mucho que aprender....Ahora cuando mis padres quieren saber algo de California, piden información de mi...Aprendí como Thomas Edison se pusó sordo cuando una persona jaló su oido. No sabía que una persona podía perder su sentido de oir.*
>
> [I started fourth grade at River Glen with Teacher Morales. I didn't know what topics we would be learning. I was told that we would study California. I didn't know many things about California but now I know a lot. Santa Clara mission is very pretty. It is located very close to San Jose. It is interesting to learn about the state in which one lives. I learned a lot about California because there is much to learn...Now when my parents want to know something about California, they ask me...I learned how Thomas Edison became deaf when a person pulled his ear. I didn't know that a person could lose their sense of hearing.]

Academic Achievement in Spanish and English

The goal at River Glen is for students to perform at or above grade level in Spanish reading and mathematics.

Reading Achievement in Spanish. Table 3.4 shows the students' average percentiles from the *La Prueba Riverside de Realización en Español* reading achievement subtest for each grade level (First through Sixth) and language background (Spanish, English). Attention to Table 3.4 indicates that performance in the first through sixth grades was at or above average (average defined as performance at the 50th percentile), except for Spanish speaking second and fifth graders, and English speaking third and sixth graders who scored very close to average (44th-45th percentiles).

Mathematics Achievement in Spanish. Attention to Table 3.4 indicates that mathematics performance was average to high for all grades, with percentile averages for all groups between 49 and 72.

Table 3.4
Spanish Reading and Mathematics Achievement Scores in Percentiles for Spanish and English Speakers at each Grade Level

Grade Level and Language Background	Reading Achievement in Percentiles	Mathematics Achievement in Percentiles
First Grade:		
Spanish Speakers	76	72
English Speakers	73	64
Second Grade:		
Spanish Speakers	44	53
English Speakers	52	64
Third Grade:		
Spanish Speakers	67	69
English Speakers	44	68
Fourth Grade:		
Spanish Speakers	63	72
English Speakers	57	71
Fifth Grade:		
Spanish Speakers	44	49
English Speakers	54	66
Sixth Grade:		
Spanish Speakers	63	62
English Speakers	45	58

Reading Achievement in English. Table 3.5 shows the students' average percentiles from the CTBS reading and mathematics achievement subtest. [It is important to remember that students did not begin reading instruction in English until third grade.] Attention to Table 3.5 indicates that the average percentiles for the native Spanish-speaking students increased across the grade levels, from the 15th percentile in first grade to the 36th percentile in sixth grade. The native English speakers scored average to well above average once they began English reading instruction in third grade.

Mathematics Achievement in English. Attention to Table 3.5 indicates that the average percentiles in English mathematics for the Spanish speakers increased from average in first grade (48th percentile) to sixth grade (59th percentile), with decrements in second and fourth grades. Among English speakers, achievement was clearly well above average at each grade level. Their scores increased from the 68th percentile in first grade to the 87th percentile in sixth grade, though the scores clearly dipped in second grade.

Table 3.5
English Reading and Mathematics Achievement Scores in Percentiles for Spanish and English Speakers at each Grade Level

Grade Level and Language Background	Reading Achievement in Percentiles	Mathematics Achievement in Percentiles
First Grade:		
Spanish Speakers	15	48
English Speakers	27	68
Second Grade:		
Spanish Speakers	12	30
English Speakers	23	36
Third Grade:		
Spanish Speakers	29	83
English Speakers	49	49
Fourth Grade:		
Spanish Speakers	19	25
English Speakers	63	64
Fifth Grade: Spanish Speakers	33	48
English Speakers	63	59
Sixth Grade:		
Spanish Speakers	36	59
English Speakers	79	87

Program Impact

River Glen's teachers and principal were very optimistic about the impact that participation in the program is having and will continue to have on the students. Overall, they believed that the ethnic and linguistic diversity of River Glen helps students to establish a healthy and realistic worldview. Teachers said that in both working and interpersonal relationships, the cognitively demanding nature of River Glen's curriculum helps the students to break down the barriers that pose so many problems in the United States today. The teachers also maintained that students learn to be leaders by participating in this program. Since River Glen receives a great deal of recognition for its innovative and successful approach to teaching, students gain a sense of pride, confidence and enthusiasm. Teachers noted that students, for the most part, understood the importance of their bilingualism in both a macro/societal and micro/individual context.

All teachers interviewed agreed that River Glen is a successful two-way bilingual immersion program. Aspects of the program that teachers felt were working particularly well involved:

- Well-defined two-way bilingual immersion model;
- Thematically integrated curriculum;
- Cross-grade articulation;
- Cognitive benefits of bilingualism;
- A staff and administrative commitment to self-examination and evaluation;
- Team teaching;
- Strong sense of respect between teachers and students;
- Parental involvement at River Glen;
- Good home support; and
- School-Home Newsletter.

Aspects of the program that teachers felt needed work or that would help the program be more effective included:

- ESL/vocabulary development of LEP students;
- Spanish language resource materials;
- Lack of Spanish-language assemblies; and
- Need for upper-grade professionals who are competent in dealing with the language and age levels of bilingual students.

Conclusions: Meeting the Goals and Objectives

This report presents the results of a case study of River Glen Elementary School after its eighth and ninth years of implementing the 90-10 two-way bilingual immersion model. River Glen administrators and teachers have worked hard to carefully define and adhere to the model at their school site. Teachers use a number of strategies to support first and second language development, to negotiate meaning, and to provide high level instruction. Because of River Glen's commitment to professional development, teachers have been trained so that they clearly understand the two-way model and have received training in appropriate instructional strategies important to the model. However, because there were two years of high teacher turnover and thus the hiring of new inexperienced teachers at River Glen during the case study, the observations and student outcomes are not as strong as they have been in years past. The teachers and administrators are very supportive of the program and feel that the program is having a very positive impact on the students' development of bilingualism and biliteracy.

Looking at these results from the perspective of the students' English language proficiency, it is clear that the English-speaking students were considered fully proficient, as expected. The results are even more dramatic for the Spanish speakers who had limited instructional time in English. In spite of the restricted quantity of English, the Spanish speakers showed growth in English language proficiency across the grades, with all but one of the native Spanish speaking third through fifth graders scoring as Fluent English Proficient. Observations of the focal students clearly showed that the Spanish-speaking students had acquired English and even preferred to use English in interactions with other English and Spanish speakers.

In addition, all of the Spanish-speaking students were fluent in Spanish and the English speakers made great gains in Spanish oral language proficiency across the grade levels. By the third grade level, all but one of the English speakers were rated as Fluent Spanish proficient. Classroom observations also demonstrated that students had the proficiency in Spanish to interact with the teacher during Spanish instruction. However, they showed a preference for speaking English and engaged in English whenever they had the chance.

Thus, the objective that students would be proficient in two languages was clearly met by both native English and native Spanish speakers. The students showed proficiency in all areas of development including pronunciation, vocabulary, grammar and even sociolinguistically appropriate use of the language.

The majority of the English and Spanish speakers performed well on the achievement test in Spanish, scoring average to high. Their above grade level scores in reading and mathematics demonstrate that they were developing appropriate reading comprehension, vocabulary and study skills, and mathematics computation and problem solving skills.

English achievement varied considerably, as expected. It is important to remember that students did not begin English reading instruction until third grade, and thus scores prior to third grade represent transfer from Spanish reading instruction and perhaps parental or other extracurricular help (e.g., Sesame Street, older siblings or peers) in English reading. It is also helpful to point out that it is much more difficult for all of these students to catch up to their peers, statistically, because most students show gains from one year to the next, and a student must make these gains to maintain the same percentile. In order to increase even five percentile points means that students must score much higher than other students who are also growing in knowledge. In addition, they must demonstrate greater growth in English when they are receiving considerably less instruction in English. Thus, to make gains in English achievement requires making greater growth than monolingual English speakers who are in English only educational programs.

In English reading achievement, the English speakers scored average once they had begun English reading instruction in third grade, and performed very high by sixth grade (79th percentile). Among the Spanish speakers, performance in English reading increased steadily across the grade levels, but still only reached the 36th percentile by sixth grade. Thus, while these students scored very well in Spanish reading and had been fluent in communicative exchanges in English for three years, they were still scoring well below average in the decontextualized area of language arts/reading. In contrast, these students scored average to above average in English mathematics with sixth graders scoring at the 59th percentile. Mathematics achievement in English for English speakers was also very high.

In conclusion, the results are positive and demonstrate that the English and Spanish speakers are becoming bilingual and biliterate, with average to high levels of content area knowledge. The students, their parents and their teachers are all very satisfied with the program and the way students are learning in the program.

IV. Mini-Case Study Report: Inter-American Magnet School, Chicago, IL

Program Overview

Inter-American Magnet School (IAMS) is a pre-Kindergarten through eighth grade school located in one of Chicago's northside neighborhoods. Data on the the school's dual language immersion program[6] in Spanish and English were collected over a three-day period in May 1995 and in a subsequent half-day visit in November 1995. During the May visit, six classrooms in grades 1, 3 and 5 were observed during routine instruction, and interviews were conducted with the one principal, program coordinator, and three of the teachers observed and one pre-K teacher who had been with the program for 16 years. During the May and November visits, quantitative data such as information on the school's demographics and achievement on standardized tests were collected. A completed questionnaire was received by mail from one of the program's founding parent/teachers; the other founding parent/teacher, now working in the Chicago Public School District's bilingual education office, was also interviewed.

IAMS is a dual language school; that is, with the exception of children in pre-K, all students in the school participate in the dual language program. Pre-K instruction is almost entirely in Spanish. About half of the students enrolled in the school are Spanish-dominant and the other half are English-dominant. Parents apply to send their children to IAMS. Due to the school's popularity, there is a waiting list for applicants. A computer lottery selects applicants from throughout the city in order to keep an ethnic and gender balance. A preference is given for admitting siblings into the program, and a few slots are reserved each year for special cases, such as children of IAMS faculty.

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[6] IAMS calls its two-way bilingual program "dual languge immersion." References to the program will be referred to as "dual language" in this case study report.

The dual language program at IAMS benefits from effective leadership and administration, a capable bilingual teaching and support staff, and active parent and community support. The principal functions as the leader of the instructional team, but shares decision-making authority with the Local School Council, which is an elected group of parents, teachers, and community members. The instructional team consists of teachers, tutors, aides, and classroom volunteers. The program also has a full-time Program Coordinator/Curriculum Developer who serves as a resource on curriculum for teachers at IAMS and disseminates information to other schools, provides in-service training opportunities, oversees the budget and purchasing, and coordinates visits by observers.

Parents and community have an integral role in the dual language program. A Bilingual Advisory Committee consists of teachers, parents of limited English proficient (LEP) students, and community members. This committee consults with the principal and the Local School Council on issues that affect LEP students.

As mandated by state educational reform laws, the Local School Council (LSC) is the governing body of the school. It has 11 members: the principal, two teachers, two community representatives, and six parents. The LSC is responsible for choosing and retaining a principal; setting the course of the school improvement plan; establishing the priorities, procedures, and objectives for the school; and controlling discretionary funds. Chapter 1 discretionary funds from the state have been used in recent years to pay the salaries of five teachers and two instructional aides, which has helped lower class sizes (under 22 students on the average).

The Parent Advisory Committee (PAC) is a voluntary organization of parents that represents parental interests to the school and the LSC. IAMS parents have traditionally been very active participants in school affairs. Through the PAC, parents contribute to school decision-making, support volunteer activity, and engage in fundraising. A Parent Volunteer Coordinator maintains a desk in the faculty resource room and assists teachers and students with diverse tasks such as commissioning student artwork for the school yearbook and ordering supplies for the staff photocopier.

Program Goals

The primary goal of IAMS is for students to become bilingual and biliterate while mastering academic content. The school is committed to a developmental bilingual education model based upon the following beliefs:

1) fluency and literacy in English and Spanish are assets;
2) the best time to learn a second language is as early in life as possible;
3) given appropriate exposure and motivation, children can learn another language;
4) given appropriate instruction and the necessary home/school support, all children can achieve their fullest potential in all areas of the curriculum; and
5) caring, accepting, and cooperative behavior on the part of school staff, parents. and students promotes the development of the whole child.

School and District Characteristics

School Characteristics. Now twenty years old and one of the oldest two-way bilingual programs in the country, IAMS is the oldest of Chicago's ten Developmental Bilingual (dual language immersion) programs. The school is located in a northside neighborhood in Chicago. It is housed in an aging, yet sturdy three-story building. The school's playground and basketball courts lie between the street and the school's entrance, across from a row of somewhat older single-family and multiple-family houses. Inside the school, the hallway displays of student projects such as *Los Grandes Reyes de Africa* (The Great Kings of Africa) and "African Proverbs" reflect the bilingual environment and the school's emphasis on multicultural education.

The school's total enrollment in 1994 was 621 students. Of these, 34.5% are limited English proficient (LEP). (In order to maintain its status as a magnet school, the LEP population must stay above 30%.) Also, about 45% of the students enter the program already bilingual. Almost 60% of the students come from low-income households. There are 44 "learning disabled" (LD) students who are partially included in the mainstream classes, but also receive pull-out support from two full-time and one part-time LD teachers.

At IAMS 71% of the students are Hispanic; 14.7% are white; 12.6% are black; and 1.2% are either Asian/Pacific Islander or Native American.

The school's attendance rate (94.6%) is higher than the district's (88.7%) and the state's (93.2%). Its student mobility rate (8.5%) is substantially lower than both, as is the school's average class size.

District Characteristics. The Chicago Public School district consists of 473 elementary schools and 78 secondary schools with 412,000 students. Minority students make up 88% of the total student population. Chicago has 55% of Illinois' low income students, 58% of its LEP students, and one fifth of the state's disabled students.

Program History

In a sense, one could say that Inter-American's dual language program is a family affair—it began that way and has continued that way since 1975. Twenty years ago, Inter-American's dual language program was born of two parent/teachers' desire to see their children in a classroom where English and Spanish speaking children would be together learning each other's language and culture. Originally, just a pre-school was planned, but the next year the program was continued into kindergarten. The parents and teachers then pushed district officials to increase the program grade by grade annually to 3rd grade. At that point, the program contemplated freezing and remaining a pre-K —3 program because it had completely taken over the school it had been placed in. Instead, it was decided to expand the program to a school-within-a-school in a larger building. The program was independent there and expanded into fourth and fifth grade. The program remained at that site for about three years, but it again outgrew the space available. At this point, the district superintendent offered the program the chance to move into a school that was being underutilized. Principals of these candidate schools, however, were not eager to take the program, because the parents and teachers involved in the program were very specific and insistent about how they wanted their program implemented. Finally, in 1983 a school was convinced to accept the program. The district superintendent, who was very supportive of the dual language approach, announced on the radio that Inter-American would be a prototype program for other bilingual programs in the city.

In 1983, three new schools were starting with federal desegregation funds and it was decided that they would be dual language schools. Many of the IAMS program staff left to help start one of the schools, Sabin Elementary.

The other, Kanoon, had a rocky start, and the third never actually adopted a dual language approach. This was the same year that the IAMS program moved to the building where it is presently housed. The program at that time went up to sixth grade, but had to absorb another 280 students who were already attending the school. The choice was to take the school or discontinue the program. The 280 students were offered the choice of entering the program that first year if they chose or moving to another school. Most of them stayed. It was a difficult year because the principal was not used to strong parent involvement and strong teacher empowerment. Some of the upper grade students already at the school had been in dual language programs up to third grade, and gradually readjusted to the format. Some of the teachers who had already been at the school were very negative toward the program. Concerned parents and experienced dual language teachers began to complain that the principal was not very supportive of the program. Eventually, parents of the program began regularly attending school board meetings to protest about the principal. Shortly thereafter, in 1985, the principal took an early retirement.

A school committee then chose Mrs. Eva Helwing (the current principal) to be principal. The committee wanted to hire a person who spoke Spanish. Mrs. Helwing, however, had been an emigrant from Hungary who had lived in Nazi Germany. Upon arriving in this country at the age of 13, she was placed in first grade because she couldn't speak English. These experiences, the committee felt, gave Mrs. Helwing the sensitivities to the reality faced by linguistically and culturally diverse students that the committee was looking for in a candidate. Mrs. Helwing's English is flawless, and in the last ten years she has managed to learn Spanish and uses it whenever possible in the school. Since her arrival, the program has undergone continual development and modification.

In 1989, Janet Nolan, one of the founding parent/teachers, took a position in the district bilingual education office. Mrs. Nolan's experience with Inter-American's program caused her to promote it at the district level as a flagship program. In 1990, the district was awarded a Title VII grant for seven bilingual education programs. Under Ms. Nolan's direction as Title VII project manager of Chicago Public Schools dual language immersion programs, staff development and training modules were developed and implemented in a more standardized way throughout the district.

In recent years, other bilingual programs in the district have begun to pattern themselves after the IAMS dual language model. With a strong model at IAMS and support from the district's bilingual education office, these programs are gradually overcoming fears that their students are not able to function academically in such a program. Chicago's dual language programs have now expanded to ten schools, educating over 3100 children. At IAMS, Adela Coronado-Greeley, the other founding parent/teacher, continues to teach. In 1994 she was named Illinois Teacher of the Year award. One former dual language student has joined the staff at IAMS, and grandchildren of IAMS teachers are now attending the school. The school even grants a scholarship each year to one graduating senior who decides to go to college. The student receives $500 for each year he or she stays in college. The family affair continues.

As mentioned above, the district has been very supportive of the dual language approach to bilingual education. Its confidence in such programs is reflected in the expansion of dual language to ten schools throughout the district.

The community continues to be very supportive of IAMS. Community members play an active role in such governing and ancillary bodies as the LSC and the Bilingual Advisory Committee. Through these channels, the community, in cooperation with the administration and staff, identifies priorities and helps guide the school's instructional and extracurricular activities.

Program Design

Program/Instructional Guidelines. Inter-American's dual language program starts in pre-Kindergarten with most instruction provided in Spanish. Up to grade 3, 80% of instructional time is in Spanish and 20% in English. Students learn to read in their native language first, and are therefore separated by language dominance for language arts classes. Native English speakers are not required to read or write in Spanish during Spanish instruction. IAMS provides Spanish-dominant students with instruction in English as a Second Language (ESL) and English-dominant students with instruction in Spanish as a Second Language (SSL) on a daily basis. From grades 4-6, the ratio changes to 60-40 Spanish-English, and in grades 7-8, it evens out at 50-50. All classrooms are integrated according to race, language dominance (with the exception of ESL, native language arts, and SSL) and ability. Since all IAMS teachers are bilingual, the teachers teach part of each day in each language. Students change classrooms and teachers for ESL, SSL, and native language arts, as well as for other classes, such as art, library, and computers.

The dual language program at IAMS originally followed a 50-50 model—spending half of the instructional time in English and half in Spanish—at all grade levels. About five years ago, the school decided that the students were not achieving sufficiently high levels of proficiency in Spanish. Consequently, more instructional time in Spanish was added from pre-K to grade 3. As a result, teachers and adminstrators have noted an improvement in Spanish proficiency levels without a corresponding drop in English proficiency levels. According to the program coordinator, the program is even contemplating extending the 80-20 distribution into fourth or fifth grade.

In addition to its emphasis on developing bilingual and biliterate students, the program incorporates a focus on technology and scientific advances of society. The bilingual curriculum follows the scope and sequence of the Chicago Public Schools and attempts to integrate into all subject areas the history, contributions, and cultures of the peoples of the Americas.

Teacher/Staff Characteristics. The faculty at IAMS reflects the balance between Spanish and English and the equal status the two languages hold at the school. With the exceptions of the computer arts instructor and the librarian (who are monolingual English speakers), all 40 teachers at IAMS are bilingual. Many are native Spanish speakers from a variety of countries (e.g., Mexico, Cuba), and others are native English speakers who have either lived in Spanish speaking countries, were raised bilingual, or have learned Spanish well enough to teach in it. Most members of the faculty hold Master's degrees or have engaged in other postgraduate studies.

Teachers at IAMS are not only expected to be bilingual, but they must believe in dual language immersion, and implement research-based instruction in their classrooms. The principal expects and encourages the school's 40 teachers to be innovative in their pedagogy. She also encourages them to create and maintain a positive affective environment in the school.

Along these lines, two further characteristics that may partially explain the success of IAMS have been identified as *caring* and *daring*. Teachers, staff, students, and parents all work together to create a safe, and caring environment. Teachers know students by name, and treat the students as if they were family. Caring, however, is not enough to ensure academic success. The faculty uses a sort of "tough love," daring students to learn and pushing them to do the work they need to do to be successful.

These factors have contributed to the success of outstanding teachers at IAMS. Among these, Adela Coronado Greeley was chosen 1994 Illinois Teacher of the Year, and Ana Bensiger and Lois LaGalle respectively received the 1991 and 1994 Golden Apple Awards for Excellence in Teaching from the Golden Apple Foundation (Chicago, IL).

Professional Development. Teachers are in charge of their own professional development at IAMS. The teachers determine their own needs and the best way to address them. Once a week the teachers meet with the principal, during which time they may discuss areas in which they feel they need more training or instruction.

All new teachers are paired with an experienced teacher who serves as a mentor for their first year. For an initial period of time, the two meet once a week for 30-40 minutes, and less frequently thereafter. These sessions are meant to provide new faculty members with an understanding of the school's philosophy, classroom management procedures, curriculum integration, and administrative matters. Additionally, all teachers are given a Teacher Manual which outlines the school's philosophy and goals, describes administrative procedures, and provides recommendations for "best practices" in the teaching of each major subject area (e.g., science, math, reading).

Teacher Cooperation and Teaming. IAMS teachers are divided into teams according to "cycles". These cycles include: pre-primary (pre-K—K), primary (1—2), middle (3—4), intermediate (5—6) and upper (7—8). The teachers are also encouraged to collaborate with their colleagues at each grade level. Teachers within each cycle meet regularly to discuss curriculum and instructional strategies to provide the best program for the students. Teachers also work with parents, parent volunteers, student-teachers from nearby universities, and instructional aides.

IAMS faculty are also actively involved in development and modification of the overall program. Teachers collaborate on the development, planning, and implementation of the curriculum , as well as examination and review of the program as a whole. They have been instrumental in bringing about such changes as lower class size, longer school days, alternative assessment, and a stronger Spanish immersion component.

Student Empowerment. In accordance with the familial nature of IAMS, it is felt that students can and should play a role in deciding issues of school governance and procedure that directly affect them. Recently, students have contributed to decisions to extend the school day and recess period, and to establish a dress code. Students also participated in the most recent evaluation of the principal.

Learning Environment

Classroom. Classrooms are large and well-lit. Desks are usually in groups of four. Displays are in Spanish and English. In the lower grades these include the alphabet in both languages. There are also calendars and manipulatives for numbers and words. In the upper grades there are wall maps. Most classrooms have bookshelves stocked with English and Spanish books, though more are in English. Bilingual books were rarer. Strung throughout the classrooms and the hallways were paper linked chains with names of books that each student had read. This was part of a schoolwide program called Literacy Links/*Enlaces de Lectura* meant to promote reading at all grade levels and award classes that read the most books.

Technology. The emphasis placed on education in technology is evident in the classrooms at IAMS. Most classrooms have one or two computers in the back of the room which students use for a variety of reasons. Many of the classrooms are also equipped with television sets and VCRs. Many have overhead projectors as well.

IAMS has a computer lab which is staffed by a full-time computer arts teacher and contains approximately 20 Macintosh and Windows-based computers. In addition to the computer arts teacher, a professor from DeVrie University comes in periodically to help students write programs, and eighth graders have written programs in Spanish for younger students.

Educational software is available in English and Spanish, but not all of the software has equivalents in the other language. For example, there is ESL software (*The Rosetta Stone*, by Fairfield Language Technologies), which is an interactive, multimedia CD-ROM program, and there is SSL software on diskettes which basically reviews Spanish grammar through drills and exercises. Reading comprehension software exists in both languages, as does word processing (Macintosh's *Bilingual Writing Center*). The students use *Grolier's Interactive Encyclopedia* on CD-ROM as a reference tool for other subject area projects.

Library Materials. The library contains primarily books in English, although the subject area category labels posted above the stacks are written in Spanish and English. There are encyclopedias and other reference materials in Spanish and a small section of Spanish-language fiction.

Instructional Strategies

General Strategies. In addition, the high expectations IAMS faculty have for their students, a general set of instructional strategies is used across grade levels. These include the use of thematic instruction, cooperative learning, whole language, sheltered instruction, hands-on math and science, and reading and writing workshops.

Language Development Strategies. Strategies for developing second language proficiency. Teachers at IAMS use a wide variety of strategies on a daily basis that help students develop both languages. Tables 4.1 and 4.2 reveal strategies observed in classrooms that were only visited one time each. It is evident by the number of strategies observed that such activities are done frequently in the classrooms. Table 4.1 exhibits strategies teachers in lower grades reported using, the strategies that were actually observed, and other strategies that were observed, but not reported.

Table 4.1
Lower-Grade Strategy Usage

Strategies Reported	Observed	Other Strategies Observed
exaggeration		
miming	X	
pairwork		
lots of reading	X	
flash cards/vocabulary activities		
peer reading		
modeling	X	
repetition of functional chunks		
repetition (in general)	X	
TPR activities	X	
games	X	
visuals (matching pictures with words)	X	
songs		
students write their own books		
use of "Big Books"	X	
	X	manipulatives
	X	slower speech
	X	comprehension checks
	X	defining
		sounding out words
	X	ample wait time for student utterances

Table 4.2 demonstrates strategies reported by one fifth grade teacher, the strategies that were actually observed in the classroom, and other strategies that were observed, but not reported.

Table 4.2
Fifth Grade Strategy Usage

Strategies Reported	Observed	Other Strategies Observed
hands-on activities		
student-centered	X	
technology		
cooperative learning	X	
caring	X	
	X	use of graphic organizers
	X	adequate wait time
	X	comprehension checks
	X	peer help
	X	modeling
	X	connection to previous knowledge
	X	ample wait time for student utterances

Teacher Classroom Behaviors. IAMS instruction is expected to be informed by current research in language acquisition and bilingual education. While the range of strategies observed is not as broad as those used in the other case study programs (i.e., Key and River Glen), it is clear that teachers are attuned to the language needs of their students.

Negotiation of meaning. As Tables 4.1 and 4.2 above illustrate, IAMS teachers use a variety of instructional strategies aimed at negotiating meaning with the students. Instructional tools, such as the computer, visuals (e.g., in Big Books, drawings on board), and graphic organizers are used frequently. In terms of language usage, some teacher speak slowly and clearly at all times, while others speak at a normal pace and slow down when they feel it is necessary. Verbal techniques used to facilitate comprehension include repetition, and rephrasing. Teachers also model language and occasionally mime actions to get meaning across to the students. The student-centered environment that exists at IAMS also allows students to feel free to ask questions and make comments, permitting them to both fine-tune their understanding and practice using newly learned language and content.

Error correction. In general, student errors in spoken language are not explicitly corrected by the teachers. The latter often model the correct word, word order, or form. In interviews, the teachers reported that modeling was their preferred form of error correction. In the one fifth grade SSL class observed, however, more explicit correction of spoken errors was observed; and in a first grade classroom, written work was reviewed in class and feedback was provided, sometimes in the form of corrective statements such as *Las oraciones empiezan con mayúsculas!* (Sentences begin with capital letters!)

Separation of Languages. While each class at IAMS is to be taught in one particular language, the teachers are not as exclusive in their use of that language during the instructional period as at the other two case study sites. Teachers occasionally switch between languages during class time, providing instruction in English, for example, and admonishing a student in Spanish. When teachers feel the students do not completely understand a concept or certain instructions, translations are occasionally made. Some teachers also engage in code-switching. For example, one third grade teacher teaches in

English, but calls on students using Spanish terms of endearment such as *mi hijo* (my son) or *mi hija* (my daughter). In interviews, teachers expressed strong aversion to consecutive translation as a model for making content comprehensible because they believed it was not conducive to developing second language abilities.

Student Language Use

Approximately two-thirds of IAMS students are Hispanic. Some know only English, others only Spanish, and about 45 percent enter the program bilingual. State desegregation laws require that the percentage of language majority students not drop below 15 percent; thus, if through attrition, it becomes necessary to add monolingual English students to the program from the waiting list, the school must do this. The school will do this as late as the fifth grade. This presents a problem for teachers, since monolingual English students do not receive additional Spanish as a Second Language (SSL) support, as the late arrival native-Spanish speaking students do in ESL. Program funds have not been able to cover the hiring of a teacher to provide this service.

Separation of Languages. It is clear that the language of preference among students is English. While some native Spanish speakers may speak in small groups in Spanish, most of the student utterances in and out of the classroom can be heard in English. The teachers generally tend to tolerate more English during Spanish time in the classroom than in the other case study programs. Some become less tolerant when the students direct their utterance to the teachers in English rather than Spanish. Teachers generally provide sufficient wait time for a student to formulate an utterance. If the student proved unable to do so in the language of instruction, however, teachers accepted student responses in the student's native language.

During instructional time in English, the students used only English. During instructional time in Spanish, students attempt to speak in Spanish to the extent they can when addressing the teacher. As at the other two case study sites, it is clear that English is the preferred language for social purposes for those students who have achieved a certain level of fluency in it. At IAMS there appears to be an even greater use of English by students when speaking among themselves than at the other case study sites. Spanish, however, is often used socially by younger students or by more recent immigrants.

Teachers vary individually by how much and by what means they remind students to speak in the appropriate language during a designated instructional period. Some teachers seem to ignore student-to-student speech in English during Spanish time, while others occasionally shout out reminders to speak in Spanish. In one instance observed, when a student was speaking in Spanish during English time, the teacher reminded "Hey, English!" When the student continued in Spanish, the teacher simply said, "I don't understand you," and the student switched immediately to English.

If the students do not rigidly adhere to the separation of languages in the classroom, they often expect the teacher to do so from early on, at least in the lower grades. Evidence of this was observed in one first grade classroom when the teacher was reading a story in English but pronounced the word "mango" as it would be in Spanish. At this point a student shouted, "Teacher, Spanish!" The teacher, obediently reiterated the word using the English pronunciation.

Fluency and Accuracy. Since many of the students are bilingual when they enter the program, the level of English proficiency is rather high among the native Spanish speakers. Some errors are evident in early grades, but appear to work themselves out in subsequent years. In particular, errors observed in spoken English among first graders relate to subject-verb inversion in embedded questions (e.g., "I know what is the treasure") and subject-verb agreement (e.g., "Yes, it do").

Getting the Spanish proficiency of both language groups to meet the English proficiency levels has been a challenge. While some English-dominant students excel in Spanish, many do not see the need to learn Spanish (at least in the earlier grades) and are not as motivated to learn. The Spanish-dominant students, too, are so drawn by the dominance of English in society that they are less motivated to improve their Spanish language skills (beyond oral proficiency). The program is working with the district bilingual office to determine what the high school standards for Spanish language classes are so that the program can work to prepare the students better to enter higher level Spanish courses (e.g., Spanish 2 or higher) in 9th grade.

Interaction with Others. The students learn to work individually and in groups. They mimic each other and the teacher quite a bit in the lower grades. IAMS students on the whole are not afraid to challenge the teacher on content, remind him/her if s/he has used the wrong language or left a letter out of a word written on the board.

Student Outcomes

Language Development (grades 3-6). Table 4.3 below shows students' average percentiles on a national scale from *La Prueba Riverside de Realización en Español* reading and writing subtests in Spanish. According to the scores, student achievement percentiles are average to above average. Students in the earlier grades, who receive more instruction in Spanish, seem to be doing better than older students, who gradually receive less. (Note: IAMS does not separate its students by language background in reporting test scores.)

Table 4.3
Spanish Reading and Writing Achievement Scores in Percentiles at each Grade Level
(1995)

Grade	Reading Achievement in Percentiles	Writing Achievement in Percentiles
3	69.1	67.0
4	64.5	70.0
5	60.6	62.2
6	61.3	53.2
7	58.9	66.8
8	61.9	57.0

Academic Achievement in English. The Illinois Goals Assessment Program is administered at every school in Illinois to measure the students' ability to meet state goals for academic achievement . Reading, mathematics, and writing are tested in grades 3, 6, and 8; and science and social sciences are tested in grades 4 and 7. Limited English proficient students from other countries are not required to take the test until they have received three years of schooling in this country. On the whole, IAMS students are doing far better than their district peers, and in many cases outperforming students in the state as a whole. (Grade level averages include students from both English and Spanish backgrounds, except for newcomers to U.S. schools resident in the U.S. for under three years.)

Illinois Goals Assessment Program Average Scores for 1994-95

Table 4.4
Percentage of Students who Meet and Exceed State Goals on the IGAP
Grade 3 (1994-95)

Level	Reading	Math	Writing
IAMS	79	98	96
District	45	64	73
State	74	88	86

Table 4.5
Percentage of Students who Meet and Exceed State Goals on the IGAP
Grade 4 (1994-95)

Level	Social Sciences	Science
IAMS	91	87
District	51	68
State	81	89

Table 4.6
Percentage of Students who Meet and Exceed State Goals on the IGAP Grade 6 (1994-95)

Level	Writing	Math
IAMS	91	82
District	88	64
State	95	85

Table 4.7
Percentage of Students who Meet and Exceed State Goals on the IGAP Grade 7 (1994-95)

Level	Social Science	Science
IAMS	84	84
District	73	56
State	88	80

Table 4.8
Percentage of Students who Meet and Exceed State Goals on the IGAP Grade 8 (1994-95)

Level	Reading	Math	Writing
IAMS	71	78	93
District	49	59	75
State	72	73	88

Academic Achievement in Content in Spanish. As indicated in Table 4.9, 1994-95 IGAP scores show that performance—even in content areas taught in Spanish at IAMS—was generally above average across grade levels, with the exception of the fifth grade's social studies and science grades. (Grade level averages include students from both Spanish and English language backgrounds.)

Table 4.9
Spanish Mathematics, Social Studies, and Science Achievement Scores in Percentiles at each Grade Level
(1995)

Grade	Math Achievement in Percentiles	Social Studies Achievement in Percentiles	Science Achievement in Percentiles
3	72.7	NA	NA
4	72.0	78.1	75.2
5	62.7	32.1	32.1
6	59.9	NA	NA
7	69.5	NA	NA
8	60.8	65.2	56.9

Program Impact

IAMS's teachers, program coordinator, and principal were very optimistic about the impact that participation in the program is having and will continue to have on the students. Overall, they believed that the school was successfully accomplishing its goal of developing bilingual students. Despite the shift from a 50-50 model to an 80-20 model, many of those interviewed noted that there is still room for improvement with regard to developing the second language proficiency of native English students. Latecomers to the program also offer a challenge to meeting the school's goals. According to the teachers, strong teacher coordination within an environment that encourages continual examination, adaptation, and improvement helps to meet this challenge, and others, more effectively, and is a strong factor in the success of this program. The teachers also felt that the program is particularly effective in creating individual and cultural pride, as a result of the school's multicultural emphasis and student-centered curriculum.

All teachers interviewed agreed that IAMS offers a successful two-way bilingual immersion program. Aspects of the program that teachers felt were working particularly well included:

- Cooperative learning;
- Caring and dedicated teachers;
- Small class size;
- Respect for all cultures;
- Parental involvement; and
- Student ownership.

Aspects of the program that teachers felt needed work or that would help the program be more effective included:

- More Spanish language resource materials;
- School-wide coordination (across grades) on instruction (especially in Spanish);

- A reduction in the number of late-entry students to program, or finding better ways to deal with them; and
- More exposure to Spanish to improve second language skills of native English-speaking students.

Conclusions: Meeting the Goals and Objectives

IAMS appears to be meeting its stated goals of maintaining and developing both the native and second language skills of all of its students. Latecomers notwithstanding, by eighth grade students at IAMS are able to speak, read, and write in Spanish and English. Although the program does not formally assess the oral Spanish abilities of the students, informal assessment is conducted as teacher teams collaborate on a regular basis. This informal assessment has also prompted improvements to the program. For instance, when the school staff determined that the level of student oral Spanish proficiency was not high enough, they altered the program to increase the amount of instructional time in Spanish. This kind of constant self-examination coupled with a willingness to continually revise and refine aspects of the program, are significant factors influencing the school's success in meeting its goals.

At the same time, on the whole, IAMS students are achieving academically at levels that exceed those of district and often those of state. A combination of high teacher expectations and active student involvement in the day-to-day issues of their education are likely contributing to the academic success of IAMS students.

The fact that IAMS children attend school so regularly can be considered an indicator of IAMS's success in achieving its goals of creating a caring, cooperative, and accepting school climate, where children from different cultural backgrounds can learn together. The school's 1994 attendance rate was 94.6 percent, which was higher than the district's and the state's rates. The intimate involvement of parents in the instructional and administrative components of the school most likely also contributes to creating a safe and comfortable learning environment. This climate is also, no doubt, reinforced by the balance that permeates the school atmosphere between English and Spanish languages, and Hispanic and Anglo cultures , as well a multicultural curriculum that emphasizes studies on the Americas.

In conclusion, the results are positive and demonstrate that the English and Spanish speakers are becoming bilingual and biliterate, with average to high levels of content area knowledge. The students, their parents and their teachers are all very satisfied with the program and the way students are learning in the program.

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APPENDICES

Appendix A

List of Products from this Study

Products on Two-Way Bilingual Education

1996

Christian, D., Carranza, I., & Montone, C. "Two-way Bilingual Education: Theory and Practice" in B. McLaughlin, B. McLeod, and S. Dalton (Eds.), *Teaching for Success: Reforming Schools for Children from Culturally and Linguistically Diverse Backgrounds.*(forthcoming 1996).

National Center for Research on Cultural Diversity and Second Language Learning. (forthcoming 1996). *Two-Way Immersion Education.* Video # 6. Video Series: **Meeting the Challenge of Teaching Linguistically Diverse Students.** Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning.

1995

Christian, D. (1995). *Two-way bilingual education programs.* **Mini-bib.** ERIC Clearinghouse on Languages and Linguistics. Washington, DC: ERIC/CLL.

Christian, D., & Whitcher, A. *Directory of Two-Way Bilingual Programs in the United States, (Revised, 1995).* (1995). Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 384 242

Compiled by D. Christian and A. Whitcher, profiles 182 programs in 100 districts from 19 states. This edition contains updated information from programs profiled in the previous three directories, plus profiles of 20 new programs. [Note: This volume replaces the **Directory of Two-Way Bilingual Programs in the United States, 1991-1992,** and the annual supplements for **1992-1993 and 1993-1994.**]

1994

Christian, D. (1994). *Two-Way Bilingual Education: Students Learning Through Two Languages.* Educational Research Report No. 12. Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 377 705

This report shows how the goals and rationale behind two-way bilingual programs throughout the United States remain consistent despite various methods of implementation, including program design, instructional features and student population.

Christian, D., & Montone, C. (1994). *Two-Way Bilingual Programs in the United States. 1993-1994 Supplement.* Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 369 265

> This second annual supplement to the *1991-1992 Directory of Two-Way Bilingual Education Programs in the United States* profiles 27 new and ongoing two-way bilingual programs in 31 schools.

National Center for Research on Cultural Diversity and Second Language Learning. (1994). *Two-way bilingual education programs in practice: A national and local perspective.* **ERIC Digest.** Washington, DC: ERIC Clearinghouse on Languages and Linguistics. EDO-FL-95-03

1993

Christian, D., & Mahrer, C. (1993). *A Review of Findings from Two-Way Bilingual Education Evaluation.* Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 382 021

> A review of 35 reports evaluating 27 two-way bilingual education programs is reported. All programs represented meet basic criteria for language of instruction, student characteristics, and emphasis on developing bilingualism. The review examined program characteristics and student outcomes, when available.

Christian, D., & Mahrer, C. (1993). *Two-Way Bilingual Programs in the United States. 1992-1993 Supplement.* Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 353 833

> This first annual supplement to the *1991-1992 Directory of Two-Way Bilingual Education Programs in the United States* profiles new and some existing programs in which language-minority and language-majority children are instructed in and through both languages. This volume contains data on 25 programs.

1992

Christian, D., & Mahrer, C. (1992). *Two-Way Bilingual Programs in the United States, 1991-1992.* Santa Cruz, CA & Washington, DC: National Center for Research on Cultural Diversity and Second Language Learning. ED 343 444

> This directory profiles of 76 programs are provided, representing 124 schools in 13 states. The entries reflect the wide variability in descriptions of the implementation of two-way bilingual education, including two-way bilingual, developmental bilingual, bilingual immersion, double immersion, interlocking, and dual language programs.

Appendix B

Teacher and Student Observation Forms

Two–Way Immersion Teaching Strategies Observation Checklist

***Basic Premise:** Observer knows target language and is able to give evidence as to how the technique is demonstrated in a lesson.*

Teacher ____________ School ____________ Grade Level ____________ Number of Students ________ Date ________
Observer ____________ Lesson Observed ______________________ Start ________ Finish ________

A. Comprehensible Input and Output

	Observed	Not Observed	Not Applicable
1. Uses concrete contextual references (visuals, realia).			
2. Implements listening activities to assist student with the development of language and its meaning to communicate.			
3. Allows for an initial listening level for students at the pre-production level (K-1).			
4. Uses a variety of question stems and activities to meet the needs of students at various levels in L2 acquisition.			
5. Exposes students to high levels of comprehensible language, using I + 1 concept.			
6. Links new vocabulary to previously learned information (transfer).			
7. Provides activities and opportunities for increased student talk as students become more proficient.			
8. Begins units of study by brainstorming students' prior knowledge before delving into content.			

B. Negotiation of Meaning

	Observed	Not Observed	Not Applicable
1. Monitors student comprehension through interactive means such as: comprehension checks, clarification request, personalization, variety of questioning types, paraphrasing, providing definitions, expansion, scaffolding, modeling.			
2. Encourages students to communicate in target language using vocabulary and structures familiar to students.			
3. Matches language with experience.			
4. Modifies teacher talk to make input more comprehensible.			
5. Provides many examples and multiple cues to meaning when introducing new vocabulary.			
6. Accelerates student communication by teaching "functional chunks" of target language, i.e. "I don't understand, please speak slower."			
7. Provides opportunities for students to use the target language: At the primary level: hands on, experimental activities At the intermediate level: group work, cooperative learning			
8. Upper grade students stretch and refine target language and technological language.			

COMMENTS ____

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C. Sheltered Content Instruction

	Observed	Not Observed	Not Applicable
1. Simplifies the language input (slower speech rate, defines words, controls vocabulary, limited use of idioms).			
2. Reviews main topic and key vocabulary.			
3. Checks frequently for understanding.			
4. Modifies the language according to the needs of the student.			
5. Bridges reading material with previously mastered oral material (student-generated information).			
6. Organizes lessons around themes appropriate to grade level			
7. Engages the students in active participation activities and responses.			
8. Integrates culture with content instruction.			

D. Thinking Skills

1. Asks questions, gives directions and generates activities to advance students through levels of thinking (recalling→evaluating).			
2. Provides activities that allow students to raise questions and support answers.			
3. Allows ample wait time after asking questions.			
4. Uses a reciprocal interaction approach in questioning strategies while guiding students through learning using varied groupings.			

E. Error Correction

1. Practices sensitive error correction with focus on errors of meaning, rather than form.			
2. Accepts student responses in target language.			
3. Develops classroom activities to address recurring errors.			
4. Allows for flow of student talk without interruption.			

F. Monolingual Delivery

1. Uses target language exclusively and does not mix languages.			
2. Models the language with natural speech and intonation using correct form (grammatically, phonologically).			
3. Models the target language in a variety of settings: social, academic, cultural and linguistic.			
4. Uses target language for all classroom management.			
5. Designs the classroom environment so that the room reflects the exclusive use of the target language.			
6. Invites student dialogue by maintaining a positive and open demeanor.			

FUTURE PERFORMANCE GOAL ____

____

____

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STUDENT LANGUAGE OBSERVATION FORM

School: ______________________

Grade: ______________________

Teacher: ______________________

Layout: Whole class___ Group ___ Pair ___

Subject: Math ___ Science ___ Lang. Arts ___
Social Studies ___ Other __________

Language of instruction: Spanish ___ English ___

Date: ___/___/___

Duration of observation: _____ (# of mins.)

Child ID	Lang. S/E/(M)	Prompter T--C--O/ S--E	Topic Co--L--So	Target I---G--T--O	C/S Prompt T--C--O/ S--E	Comments

Appendix C

Interview Protocols

TWO-WAY BILINGUAL EDUCATION: CASE STUDIES
Interview Protocol
(annotated guide)
Interview with Program Teachers & Aides

Interviewer:______________________________ Interviewee:______________________________

Date:______________________________ School:______________________________

Classroom Description

* Tell me about your class. *(exact numbers, when possible)*

Student composition:

male/female:

Spanish language background:

English language background:

other language background:

ethnic & racial background:

socioeconomic status:
(# receiving free or reduced price lunch)

beginning of year vs. end of year (transiency):

similar to previous years?

Do you teach in the English component, the Spanish component, or both?

If English or Spanish only:

What subjects do you teach in English/Spanish?

How do you coordinate with teachers in the other component?

---

* Denotes a question or section that need not be asked of aides.

If both Spanish and English:
Do you separate the two languages for instruction? If so, how?

How does the general level of Spanish language proficiency compare among your students (i.e., Spanish-, English-, and other-language backgrounds)?

(Spanish LANGUAGE proficiency only, not content; elicit comparisons of all three groups: Spanish, English, Other-language)

If there are differences, what do you think causes them?

How does the general level of English language proficiency compare among your students (i.e., Spanish-, English-, and other-language backgrounds)?

(Same as above)

If there are differences, what do you think causes them?

*Program Description and Practices

(1st grade teachers only) How much English proficiency do the Spanish-speaking students typically have when they enter the program?

(Estimated on the average: a lot, some, a little, none)

Is this required for admission into the program?

How are Spanish and English distributed as languages of instruction for your students?
(i.e., am/pm, by day, by week, by subject, by theme, by semester)

In which language do your students learn to read initially?

Does that practice work well, in your opinion?

Are special curricula or materials used in your program?

Do you have any other special resources?

Classroom Practices

How do you group students for instruction? *(put checks next to each that applies; comments can be written next to each if needed)*

whole class
small groups
homogeneously
mixed ability levels
mixed language backgrounds
mixed language proficiency levels
structured or spontaneous formation by teacher
structured or spontaneous formation by students

Do the language needs of second language learners in your classroom condition content-area instruction? *(trying to get at how teachers deal with language development when teaching content)*

If so, how? If not, why not?

What strategies have you found to be particularly effective in helping the students to develop language proficiency in their **second** language?

Have you tried some strategies that haven't worked as well? *(solicit examples)*

Do some strategies work better for one group of students than another? *(solicit examples)*

What strategies have you found to be particularly effective in helping the student to develop proficiency in their **native** language?

Have you tried some strategies that haven't worked as well? *(solicit examples)*

During instructional time in Spanish, what language would you recommend a teacher use in the following situations:

When a student, using English, talks to the teacher... *(circle one)*

...about something unrelated to the class (e.g., a personal matter) E/S

...about an academic task (e.g., questions about what to do) E/S

...as part of the task (e.g., answers a teacher's question in front of the class) E/S

During instructional time in Spanish, what would you recommend a teacher do in the following situations: *(getting at code-switching prompts)*

When a pair of students, using English...

...talks about something unrelated to the class

...talks about an academic task or interacts in the process of completing the task

...performs the task (e.g., corrects each other's spelling)

Would your recommendations be the same or different if Spanish were being used in the same situations during instructional time in English?

If a student makes a linguistic error while speaking in the following situations, how do you react to it: *(You may have to provide an example, such as, "Yo dice..." or "I says.")*

(Examples below should be given only if the situation is not clear as stated.)

...if the student is talking about something unrelated to the class? (e.g., home)

...if the student is talking about an academic task? (e.g., asking a question)

...if the student is performing an academic task? (e.g., giving a presentation)

In general, would your reactions differ depending on whether the student were speaking with a social or academic purpose?

Have you received any guidance on how to respond to errors in language use?

Student Progress

How are students reacting to learning in two languages?
(Do they seem satisfied with this way of learning?)

Are there areas that pose particular difficulties for some students?

*Do students read books of their own choice in their second language?

Which aspects of your teaching do you think are the most important in helping Spanish language background students succeed?

Are these techniques different from those used with other students?

What aspects of the classroom environment or program do you think are the most important in helping Spanish language background students succeed?

What aspects of school outside the classroom are helpful for native Spanish-language students (e.g. extracurricular activities)?

Program Success

Do you think this program is effective?

Are there aspects that work particularly well? Which ones?

Are there aspects that need improvement? Which ones?

What would help the program be more effective?
(materials/teacher training/parent involvement/other)

What impact do you think participation in this program will have on your students in the future?

Background

Tell me a little about your background.

What languages do you speak? How did you learn them?

In a given situation, in which you haven't decided which language to use, which language would come out automatically?

Have you ever lived abroad? Where?

Have you had other cross-cultural experiences?

Educational background? Credential/certification?

How did you get involved with the two-way bilingual program?

How long have you been with this program? What position(s)?

Any other comments you would like to make?

TWO-WAY BILINGUAL EDUCATION: CASE STUDIES

Interview Protocol

Interview with School Staff (Principal, Administrators, Resource Teachers)

Interviewer:________________________ Interviewee:________________________

Date:________________________ School:________________________

Program Background and Features

Tell me about the two-way bilingual program in your school.

How are you involved in the program? What is your role?

(principal/administrator) how did it get started?

how has it developed over the years?

how is it financed?

what are its goals?
students

curriculum

program (teacher development, parent participation, etc.)

How are students recruited and admitted into the program?

Do you screen students in any way?

(if the program does not involve the whole school) How does this program relate to other programs at your school?

Does it receive different resources?

How does the program promote Spanish language development for all students?

How does the program promote English language development for all students?

Guidelines for Teachers

What are your expectations for instructional practice?

What do you tell teachers about how the following should be done:

separation of languages?

error correction?

instructional groupings?
quantity and quality of visual displays in classroom? (language input)

other issues?

Program Success

Are you satisfied with the direction and progress of the program?

In what ways is the program particularly effective?

What areas could use some improvement?

What level of Spanish proficiency do students achieve in this program?

Do you think they maintain it? How?

What level of English proficiency do students achieve in this program?

Do you think they maintain it? How?

Have you followed up on any graduates of the program?

What/how are they doing?

(if not already answered) Do you think participation in this program had an impact on them? In what way?

Response to Program

What has been the response to the program of:

students

parents

other school staff

community

How does the School Board support the program?

Personal Background

How long have you been at this school?

with the two-way program?

Educational background? Credential/certification?

What languages do you speak? How did you learn them?

Any other comments you would like to add?

NOTE

Much of the information solicited in this protocol may already be available from evaluation reports or other sources, including personal knowledge (e.g., the *Program Background and Features* and *Personal Background* sections). If the interviewer feels that asking the interviewee to provide this information would be redundant or an inefficient use of time, the interviewer may fill in that information beforehand and simply review it with the interviewee. If such information is included and not reviewed and approved by the interviewee, a citation of the source of that information provided should be attached to the completed protocol.

Appendix D

Teacher Questionnaire

TWO-WAY BILINGUAL EDUCATION: CASE STUDIES

Questionnaire for Program Teachers

Please respond to the following questions as fully as possible. Send back your responses by mail or return them to Chris Montone at CAL on the next visit. If you have any questions, feel free to contact Chris Montone at 202-429-9292. THANK YOU FOR YOUR HELP!

Name:

School:

Grade level currently teaching:

Providing instruction in:

_____ Spanish _____ English _____ both Spanish and English

How long have you worked in a two-way bilingual education program?
Have you taught other grade levels? subjects?

What are the desirable results of a two-way program:

for the students?

for the school?

for the community?

What are the three most important factors that determine success of a two-way program in achieving those results?

1.

2.

3.

From your experience, please describe the special challenges presented by two-way bilingual education classes compared with other classes.

How do you deal with those challenges?

Do you find this type of program promotes the development of high levels of Spanish proficiency among (please comment):

native Spanish speakers?

native English speakers?

native speakers of other languages?

Do you find this type of program promotes the development of high levels of English proficiency among:

native Spanish speakers?

native English speakers?

native speakers of other languages?

Please answer the following questions with regard to language usage of your students:

a. Are your native Spanish speaking students better at using English for academic purposes (i.e., talking about math, science, social studies) or for social purposes (i.e., talking with friends)? What are some of the differences, if any?

b. Are your native English speakers better at using Spanish for academic purposes or for social purposes? What are some of the differences, if any?

How important is the integration of native Spanish speakers and native English speakers in the classroom in a two-way bilingual program?

What strategies do you use for getting speakers from different language backgrounds to work and play together? Have you tried some that you found to be particularly effective? Have you tried some that haven't worked as well? Please describe.

Are there any other comments you would like to make?

THANK YOU FOR TAKING THE TIME TO RESPOND

Appendix E

Student Oral Proficiency Rating (SOPR)

Total Score______

Student Oral Proficiency Rating*

Student's Name______________________ Grade__________ Language Observed______________________

School______________________ City______________________ State______________________

Rated by______________________________ Date______________

DIRECTIONS: For each of the 5 categories below at the left, mark an "X" across the box that best describes the student's abilities.

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
A. Comprehension	Cannot understand even simple conversation.	Has great difficulty following what is said. Can comprehend only "social conversation" spoken slowly and with frequent repetitions.	Understands most of what is said at slower-than-normal speed with repetitions.	Understands nearly everything at normal speed, although occasional repetition may be necessary.	Understands everyday conversation and normal classroom discussions without difficulty.
B. Fluency	Speech is so halting and fragmentary as to make conversation virtually impossible.	Usually hesitant; often forced into silence by language limitations.	Speech in everyday communication and classroom discussion is frequently disrupted by the student's search for the correct manner of expression.	Speech in everyday communication and classroom discussion is generally fluent, with occasional lapses while the student searches for the correct manner of expression.	Speech in everyday conversation and in classroom discussion is fluent and effortless, approximating that of a native speaker.
C. Vocabulary	Vocabulary limitations are so extreme as to make conversation virtually impossible.	Misuse of words and very limited vocabulary make comprehension quite difficult.	Frequently uses the wrong words; conversation somewhat limited because of inadequate vocabulary.	Occasionally uses inappropriate terms or must rephrase ideas because of inadequate vocabulary.	Use of vocabulary and idioms approximates that of a native speaker.
D. Pronunciation	Pronunciation problems so severe as to make speech virtually unintelligible.	Very hard to understand because of pronunciation problems. Must frequently repeat in order to be understood.	Pronunciation problems necessitate concentration on the part of the listener and occasionally lead to misunderstanding.	Always intelligible, though one is conscious of a definite accent and occasional inappropriate intonation patterns.	Pronunciation and intonation approximate a native speaker's.
E. Grammar	Errors in grammar and word order so severe as to make speech virtually unintelligible.	Grammar and word order errors make comprehension difficult. Must often rephrase or restrict what is said to basic patterns.	Makes frequent errors of grammar and word order which occasionally obscure meaning.	Occasionally makes grammatical or word order errors which do not obscure meaning.	Grammatical usage and word order approximate a native speaker's.

*This form is an adaptation of the Student Oral Language Observation Matrix (SOLOM) developed by the San Jose (California) Unified School District

Development Associates, Inc.
Arlington, Virginia

Signature of rater ______________________

rateform ea2

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Appendix F

A Developmental View of Biliteracy

by Elizabeth Howard

INTRODUCTION

Given the increasing number of language minority students in the United States, there is a clear need to identify educational models that effectively promote the academic achievement of these children. One such model is what is known as a dual immersion or two-way bilingual program. In this model, both native English speakers and language minority students receive instruction in both English and another language, frequently Spanish. This type of program is considered desirable for several reasons. First, it reduces the segregation that frequently results from other forms of bilingual education. Second, it allows language minority students to continue to develop literacy and academic abilities in their native language while simultaneously gaining academic fluency in English. Finally, it provides native English speakers with the opportunity to develop far greater levels of second language proficiency than are usually achieved through traditional programs of foreign language instruction in this country.

Even within the two-way model, there is a great deal of variation with regard to the delivery of instructional services. This variation usually centers around competing ideas regarding the amount of instructional time that should be spent in each language, and when literacy instruction in the second language should begin. Some programs provide initial literacy instruction solely in a language other than English to all children, regardless of their native language. Other programs separate students according to language dominance in order to provide initial literacy instruction in the native language only. Second language literacy is introduced in these programs only after native language literacy has been acquired. Still other programs provide all students with simultaneous literacy instruction in both English and another language.

Part of the difficulty in deciding which type of program to implement is that there is so little relevant research on biliteracy development. Furthermore, the majority of the biliteracy research that does exist tends to focus on reading development in the second language. Very few studies discuss second language writing development; even fewer studies compare the development of native language writing ability with second language writing ability. Since literacy development is such a core responsibility of schooling, this lack of relevant research is a serious problem for practitioners interested in developing two-way bilingual programs.

The purpose of this study, then, is to provide greater insight into the biliteracy development of children enrolled in two-way bilingual programs. Specifically, this study looks at first and second language writing development of children enrolled in a 50/50 two-way (Spanish/English) bilingual program. In this type of model, all children receive literacy instruction in both English and Spanish from their time of entry into the program. Therefore, analyzing writing samples of children in this type of program affords us a unique opportunity to investigate the effects of simultaneous rather than sequential biliteracy development.

The research questions that this study attempts to answer are:

1) How is writing ability in the first language (L1) related to writing ability in the second language (L2)?

2) Is the relationship between first and second language writing ability different for native English speakers vs. native Spanish speakers?

3) Does the relationship between first and second language writing ability change at different grade levels?

SECOND LANGUAGE WRITING RESEARCH

In general, second language writing research tends to fall into one of four categories: English as a Second Language (ESL) research, research on language minority students in the United States, foreign language education research, or international research on two-way bilingual/immersion education.

Much of the ESL research on second language writing development has focused on international students attending universities in the United States (Derrick-Mescua & Gmuca, 1985; Eisterhold, et. al., 1990; Norment, 1982). In other words, the participants in these studies were adults who were learning to write in English as a second language, and who were already reading and writing at the college level in their native language. Obviously, these studies are of limited value to those interested in two-way bilingual programs in the U.S., since they deal with populations that differ in age, native language literacy ability, and level of educational attainment from the population that is enrolled in two-way bilingual programs in this country.

As the percentage of language minority students in U. S. schools has risen, there has been an increase in studies that examine bilingualism and biliteracy development in non-native English speakers. These studies are all highly relevant to the topic of this paper, as they identify various issues related to the biliteracy development of language minority students in the United States. These issues include the writing processes employed by bilingual students (Homza, 1995), typical features found in native Spanish speaking children's L1 and L2 writing samples (Edelsky, 1982), the relationship between first and second language writing ability (Lanauze & Snow, 1989), effective learning contexts for bilingual students (Hornberger, 1990), and factors influencing the ability of native Spanish speakers to write persuasive essays in English (Bermúdez & Prater, 1994). One limitation of these studies is that they do not address continued native language literacy development after second language (i.e. English) literacy has developed. Another limitation is that all of these studies focus exclusively on language minority students; in fact, all but the Hornberger study focus specifically on native Spanish speakers. Therefore, they do not address the issues that native English speakers face as they try to develop writing ability in a second language.

In fact, since most research on second language writing development has focused on populations that are learning English as a second language, there is virtually no information on the second language writing development of native English speakers at any age level. One study that does attempt to look at this issue was conducted by Valdés, Haro, and Paz Echevarriarza in 1992. This study described the Spanish writing ability of native English speaking college students enrolled in beginning, intermediate, and advanced Spanish classes. This study found that all students were able to transfer a number of their L1 writing strategies to L2 writing, despite very limited L2 language proficiency in some cases, This study corroborates the findings of Lanauze and Snow (1989), who found that L1 writing ability in Puerto Rican elementary school students was a better predictor of L2 writing ability than L2 oral language proficiency. Hence, the Valdés, et al. study is helpful in that it both supports the findings of an earlier study and provides insight into the second language writing processes of native English speakers. However, since it deals with an adult population that is already highly literate in its native language, its relevance to the topic of this paper is limited in the same way as the ESL studies are.

Obviously, the studies with the greatest relevance to the study described in this paper are those that have also looked at the writing development of children in two-way bilingual or immersion programs. For example, one study looked at the emergent writing development of first graders in a Spanish/English two-way bilingual program (Kuhlman, et al., 1993). This study was more comprehensive than most, as it analyzed the writing development of native English speakers as well as that of native Spanish speakers. However, since students were allowed to write in the language of their choice, virtually all writing samples were written in the dominant language of the child. Therefore, while this study is valuable in comparing emergent writing strategies of native English speakers and native Spanish speakers in the same program, it does little to further our understanding of the relationship between first and second language writing ability.

In addition to the studies conducted on students in two-way bilingual programs in the United States, there are also a few studies that document the second language writing ability of students in immersion programs in other countries. For example, one Canadian study compared the French writing ability of native English speakers enrolled in a French immersion program with that of native French speakers (Harley & King, 1989). This study showed that the native English speakers rarely used French verb forms that had no direct translation in English. Furthermore, they tended to prefer verb forms in French that fit into grammatical structures similar to those found in English. Both of these tendencies lend support to the notion that second language learners seem to bootstrap linguistic knowledge and writing conventions from the first language when writing in the second language. This hypothesis has been similarly supported by other international studies of children in immersion programs (Canale & Frenet, 1988; Nathenson-Mejía, 1989).

By analyzing Spanish and English writing samples of native English speakers and native Spanish speakers in a 50/50 two-way bilingual program, we hope to analyze many aspects of biliteracy that have still remained largely undiscussed in the literature. First, since the children received literacy instruction in both English and Spanish from their time of entry into the program, this study attempts to look at the effects of simultaneous rather than sequential biliteracy development. Second, because both Spanish and English writing samples were collected, this study allows us to investigate what happens to native language writing ability as second language writing ability develops. Third, because writing samples were collected from native English speakers as well as native Spanish speakers, this research will expand the discussion on second language writing development in languages other than English. Finally, because writing samples were collected from children in grades three through six, this study will provide a window into what happens in first and second language writing ability beyond the emergent literacy level. As the number of two-way bilingual programs in the United States continues to rise, these issues become increasingly relevant.

METHODS

Data Collection

In the fall of 1993, Spanish and English writing samples were collected from the portfolios of eight target children involved in the study. Four of the children were in the third grade at that time; the other four students were in the fifth grade. At each grade level, two native Spanish speakers and two native English speakers were targeted. Two years later, in the spring of 1995, Spanish and English writing samples were again collected from the portfolios of the same children.[1] In doing this, it was hoped that some developmental changes in the children's writing ability in both their first and second languages might be observed.

Data Analysis

Because the writing samples collected for use in this study were authentic (i.e. written in the context of class assignments rather than from a specific prompt for the purpose of this study), they covered a wide range of topics and writing genres. For this reason, a holistic, qualitative approach was used to evaluate them. Using the county's writing assessment rubric as a basis for coding categories (Attachment A), a writing assessment was developed that could be used to evaluate all of the writing samples, regardless of topic, genre, or language (Attachment B). This assessment separates the evaluation criteria into four categories: organization, topic development, mechanics, and language use. Each writing sample was analyzed according to these four categories in order to ensure thorough evaluation of each sample as well as facilitate comparison across samples.

FINDINGS

Case Studies

In order to more fully demonstrate how first and second language writing ability has developed in the children targeted for this study, case studies of two children are presented here. A native English speaker and a native Spanish speaker from the third/fourth grade cohort have been chosen for the case studies.[2] These case studies are meant to provide a fuller picture of the first and second language writing development of both native English speakers and native Spanish speakers. They will also hopefully serve to contextualize the general findings reported later.

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[1] In the 3rd/4th grade cohort, an incoming fourth grader replaced one of the targeted native Spanish speakers during the second year of data collection. This was done because the child that was initially targeted during the first year of the study was subsequently considered for special education. Additionally, it was not possible to collect sixth grade English writing samples from the two native English speakers in the 5th/6th grade cohort.

Christie[3]

Christie is a native English speaking girl who was in third grade at the time of the first data collection in the fall of 1994. Her third grade English writing sample, entitled "Magnet Magic", is a description of how to conduct a science experiment with magnets.

The organization of this one paragraph essay strongly resembles that of an oral presentation. Christie begins by greeting her audience and introducing herself. "*Hello there! My name is Dr. Robinson.*" After this personal introduction, she provides the purpose of the essay in the thesis statement, "*Today I'm going to show you how to build a magnet.*" Following this statement, Christie invites the readers into her lab, and takes them on a mini-tour. In this way, Christie devotes approximately half of her essay to setting the stage. The second half of the essay is more concerned with the actual processes involved in the experiment - the materials that are needed, the steps that should be followed, and the result that is obtained. Finally, Christie takes leave of her audience by announcing, "*I must report this to the*

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[2] Although it may seem ideal to present case studies of students in the fifth/sixth grade cohort as well, the case studies are quite lengthy, and it would have increased the length of this paper considerably to do so. Therefore, in order to stay within a reasonable page limit, it seemed more appropriate to include two well developed case studies rather than four abbreviated case studies.

[3] All names of individual students used in this report are pseudonyms.

others I will come back. Goodbye!" Overall, Christie's organization of this essay is quite solid, as it includes a relevant title, an introduction, a thesis statement, several supporting details, and a conclusion.

With regard to topic development, Christie builds a lot of descriptive information into her text, and definitely brings her reader into the situation with her. "*Well, here we are in the lab. This is our experiment table.*" In this way, Christie does a very nice job of creating an image in the reader's mind, and helping the reader to feel included in the action.

The topic development becomes less thorough, however, as Christie attempts to explain the actual process of the experiment. "*The materials you need are: a nail, wire and a batery. First, wind the wire wind bothends of the wire around the nail. Then take both ends and attach them to the battery. Do my eyes decieve me? 54 paper clips?*" Initially, her directions make sense, and they use the materials that she told the reader were necessary. However, when she mentions the 54 paper clips, things become very confusing. First, she never told the reader that paper clips were needed to do this experiment. Second, it is difficult to know what exactly has happened with the 54 paper clips, and why Christie is so surprised. In other words, Christie never explicitly states what should happen if the reader performs the experiment properly. Rather, she implies it by exclaiming, "*Do my eyes decieve me? 54 paper clips?*" A reader with no prior knowledge may be inable to infer that Christie has made a magnet with the battery, wire, and nail, and that she has used the magnet to pick up 54 paper clips.

Christie's essay contains very few mechanical errors. She consistently uses conventions of capitalization correctly for words in her title, proper nouns, and the first words of sentences. Similarly, she seems to have a strong awareness of punctuation conventions, as she correctly employs a wide array of punctuation marks such as periods, question marks, exclamation points, and ellipsis. In the entire essay, there is only one sentence that is lacking appropriate punctuation. Christie's essay also contains few spelling errors; "*batery*" and "*decieve*" are the only two words that she mispelled. In general, then, Christie's third grade English essay is very strong from a mechanical standpoint.

Linguistically, Christie's essay is very clear. Any comprehension difficulties that a reader may have would more likely have to do with missing information than with incorrect grammatical structures or inappropriate lexical items. There are only two sentences that have slight grammatical problems, neither of which are uncommon for third graders nor impede comprehension. In one instance, it seems that Christie was performing an on-line correction of her sentence, similar to retracing in oral language. *"First, wind the wire wind bothends of the wire around the nail."* In another instance, Christie wrote, *"So far, we've do 79."* Here, given that Christie is a native English speaker and has correctly conjugated all of the other verbs in this essay, it is more likely than her error was due to carelessness than to grammatical misunderstanding. In other words, both of these errors seem typical of monolingual English speaking third graders, and do not seem related to her simultaneous acquisition of Spanish literacy.

Like her third grade English essay, Christie's third grade Spanish essay is also a description of a science experiment. This one is entitled "*Cambios Cambios*" ("Changes Changes") and has to do with physical and chemical changes in matter. In general, the organization of this essay is quite similar to the organization of her English essay. Again, it is a one paragraph essay with a title, a personal introduction, a topic sentence, supporting details, and a conclusion.

The content of this essay is similar to the English essay in that it also explains how to conduct a science experiment, and includes information such as what materials are necessary, and what steps need to be followed in order to do the experiment. Unlike the English essay, though, Christie is much more business-like and less creative in the Spanish essay. Rather than presenting herself as a scientist and starting by giving the reader a tour of her lab, she presents herself as a student, and immediately begins to give relevant information regarding how to conduct the experiment. *"Hola, mi nombre es Christie. Hacemos muchos experimentos en mi clase. Aqui es uno."* ("Hello, my name is Christie. We do a lot of experiments in my class. Here is one.") Similarly, her closing is also much more reality based in the Spanish essay. Rather than running off to share her findings with other scientists as in the English essay, she closes the Spanish essay by saying she needs to leave to go to math class. *"Oh! es hora de matematicas!" vas a volver! Adios!"* ("Oh! It's math time! You'll come back! Goodbye!")

As with the English third grade writing sample, Christie continues to be somewhat vague regarding the actual purpose of the experiment. Again, this may be for a variety of reasons. She may not understand the purpose of the experiment, she may understand it but not be able to communicate it in Spanish, or she may understand it but not realize that her readers may not possess the same background information that she does.

Although Christie's third grade Spanish essay is relative good from a mechanical standpoint, it does contain more mechanical errors than her English essay. As was clear from her English essay, she definitely understands the concept of a sentence and knows where to use periods and capitalization. She also understands how to vary her sentences by including exclamations and questions. What she does not seem to have yet mastered, then, are the specific nuances of Spanish punctuation. Specifically, she never uses inverted question marks or exclamation points at the beginnings of sentences, such as *"Cual tu gusta?"* ("Which do you like?") or *"Adios!"* ("Goodbye!"). Additionally, she never uses accent marks. For example, in the sentence,*"Aqui es uno"* ("Here is one"), the accent mark is missing from *"Aquí"*. Christie's spelling in this Spanish essay is equally good as her spelling in the third grade English essay, with only one spelling error in the entire paragraph.

Linguistically, Christie's essay is relatively good, although it does contain some features that mark her as a non-native speaker. Most of the sentence structures that she uses have direct translations in English; however, most are also valid constructions in Spanish. One sentence that is a direct translation of English and incorrect in Spanish is *"Aqui es uno"* ("Here is one"). This is not a construction that a native speaker would use, and it does not really make sense in Spanish. A native speaker would be more likely to say *"Este es un ejemplo"* ("This is an example").

Christie commits far more grammatical errors in her Spanish essay than she did in her English one. Most of the errors have to do with incorrect agreement or use of pronouns. For example, at one point she writes *"el tazo"* instead of *"la taza"* ("the cup"). In this situation, she may have just been careless, since she did write *"la taza"* correctly two other times in the essay. However, in other examples, it seems that she may have some confusion about the correct way to phrase things in Spanish. For example, she asks the question *"Cual tu gusta?"* instead of *"¿Cuál te gusta?"* ("Which do you like?"). This is a frequent mistake of native English speakers learning Spanish, who often tend to use the verb "gustar" in the same way that "to like" is used in English. Therefore, they pair it with subject pronouns rather than object pronouns.

In general, despite the few errors, this essay would be comprehensible to a monolingual Spanish speaker. There are a few sentences that would be confusing, such as *"Aqui es uno"* and *"dos cucharadas de plastico"* ("two spoonfuls of plastic") instead of *"dos cucharas plásticas"* ("two plastic spoons"). Other than that, though, any difficulties in comprehension would probably have more to do with missing information rather than linguistic errors. There are no code-switches in this essay.

Christie's fourth grade English essay is a one paragraph expository on the Potato Famine entitled *"Immigration from Starvation."* This essay is organized in the style of deductive logic, with the topic sentence at the end. *"So, emmigrating from starvation, the Irish came to 'the promised land'."* All of the prior sentence are sequentially ordered, laying out the chain of events that led up to Irish immigration to the United States in the mid 1800's.

In general, the content of this essay seems to be sufficient in order to make it comprehensible to an uninformed reader. The first sentence of the paragraph sets the stage by talking about the famine in Ireland in the 1840's. The following five sentences provide supporting details and help to make a sequential, logical argument for why the Irish came to the United States. In general, the content seems more fully developed than it was in either of the two third grade essays. That is, a reader from outside of the class can easily understand this essay without needing to gain additional information.

Not surprisingly, Christie's fourth grade English essay contains very few mechanical errors. There are two spelling errors, and one missing apostrophe in *"Irelands"*; other than that, the essay is mechanically flawless. Furthermore, there is an increase in her use of commas from her third grade essays. Most commas in the third grade essay were used to separate items in a series; commas in this fourth grade sample reflect growing grammatical sophistication, as they are used to separate clauses in complex sentences. *"In the early 1840's a terrible famine occured in Ireland; consecuently, many people died."*

As is evident from the last sentence, Christie's linguistic sophistication has developed from third grade. In this fourth grade essay, she makes use of a great number of sentence adverbs (i.e. *"consecuently", "As a result"*, etc.) in order to establish cohesion and link clauses. This is evidence of her growing vocabulary as well as her increasing grammatical sophistication. In addition, there is greater variation in the verb tenses that she uses in this essay than there was in her third grade essays. This fourth grade English essay contains verbs in a number of tenses, such as the present, simple past, past perfect, and passive voice.

Christie's fourth grade Spanish essay is also an expository essay about Ireland. The Spanish essay is organized differently, however, using four paragraphs rather than one. The organization does not seem as tight as it did in her fourth grade English essay. Perhaps this is due to the cognitive challenge of writing in a second language. It might also be related the the challenge of using multiple paragraphs to organize and expand on different sub-topics rather than writing a single paragraph essay. There seems to be some evidence for this theory, given that the use of paragraphs seems sort of arbitrary, with each paragraph sometimes containing multiple topics. Moreover, the paragraphs lack internal cohesion, and it is sometimes difficult to know what the main idea of a paragraph is.

Christie conveys a lot of information in this text. In describing Ireland, she tells the reader where it is, what kind of climate it has, the languages that are spoken there, and what some of the larger cities are. Further, she provides an evaluation, stating that it's pretty. (*"Irlanda es una isla muy Bonita norte y sur."*)

As mentioned previously, Christie's ability to develop cohesion in her Spanish fourth grade essay is not as sophisticated as in her English essay. In this Spanish essay, she tends to repeatedly use words such as *"Tambien"* ("Also") and *"Otro"* ("Another") to link sentences, whereas in her English essay, she used a wide variety of words and phrases like *"consecuently"* and *"as a result"*. It seems that one possible remedy for this would simply be to focus some instructional time on connector words and phrases in Spanish. This would be beneficial to Christie, as she understands the concept of developing cohesion, but seems to lack the Spanish vocabulary to develop it fully. In addition, it is likely that part of her problems with cohesion in the Spanish essay stem from her struggles with the concept of paragraphing. It seems likely that as her ability to organize information into paragraphs becomes more sophisticated, her ability to develop cohesion in Spanish should also improve.

Not surprisingly, Christie has few mechanical errors in this essay. As with her other essays, there are a few spelling errors and one or two errors of capitalization, but no real patterns of errors in those areas. Her punctuation is also strong in this essay, and lacks the errors that were found in her third grade Spanish writing sample. In that case, inverted punctuation marks were missing from the beginnings of sentences. In this fourth grade essay, all sentences ended in periods, so there was no need for inverted punctuation. Finally, unlike the third grade Spanish essay, there are accent marks on three of the four words that require them. This is an encouraging trend.

Linguistically, this essay is relatively solid, and could be easily understood by a native speaker. There are a few errors, however. For example, the essay contains a few agreement errors, such as *"el comida"* ("the food"), *"otro ciudades"* ("other cities"), *"toda las dias"* ("every day"), and *"un isla"* ("an island"). Interestingly, the incorrect articles and adjective are usually masculine and singular. This is something that occurred in other students' Spanish writing samples as well, and seems to be part of a pattern. That is, when the gender of a word is not known, the default action tends to be to use the masculine/singular modifier. The one exception here is *"toda las dias"*, where *"días"* is perceived to be feminine, and is therefore accorded feminine modifiers. The fact that she uses the single modifier *"toda"* rather than *"todas"* is interesting, given that in other instances she correctly showed agreement in similar phrases, such as *"muchas ciudades"* ("many cities"). It is difficult to know if these are merely careless errors, then, or if they are symptomatic of some sort of underlying misunderstanding about how to show agreement in Spanish.

Additionally, there are some errors with verb constructions. In one instance, she uses "ser" instead of "estar" (*"Es divido"*). This is a classic problem for learners of Spanish as a second language, and is not surprising. In another instance, Christie uses a verb structure that fits into an English syntactic frame rather than a Spanish one. She writes, "Mucho inglés es hablado tambien" ("A lot of English is spoken also") rather than "Se habla mucho el inglés también," which is a more typical Spanish construction. This is the same phenomenon that Harley & King noticed when they conducted their study of native English speakers enrolled in a French immersion program (Harley & King, 1989).

Finally, unlike Christie's other three essays, there is an instance of code switching in this essay. In the last paragraph, Christie switches to Gaelic in order to offer the traditional Irish saying "Erin go bra!", which she seems to spells according to English phonetic conventions. Underneath this saying, she provides a Spanish translation in parentheses, "isla toda las dias." In providing this translation, Christie seems to be making it clear that she does not assume that her Spanish readers will necessarily understand the Gaelic expression.

Overall, then, Christie is a strong writer in both languages, although her writing in English is clearly stronger than her writing in Spanish. General organizational ability and the use of mechanical conventions that are shared by both languages tend to remain the most constant across languages. The ability to include relevant details, use language specific mechanical conventions, and employ appropriate linguistic strategies seem more difficult for her in Spanish than in English. This is unsurprising, given that English is her native language, as well as the language of the wider society.

Ricardo

Ricardo is a native Spanish speaker who was in third grade when the intial writing samples were collected. Like Christie, his third grade English essay is a description of a science experiment. The one paragraph essay is entitled, *"Process of the egg experiment."* Like Christie, Ricardo organizes his essay well, with a personal introduction, a topic sentence that introduces the experiment, supporting details that include the necessary materials and the steps that should be followed, and a conclusion.

Although Ricardo's essay is structurally strong, its topic development is lacking a lot of important details. For example, the first thing that he tells the reader to do is *"...make a chart so you can write results."* However, he does not specify what kind of chart we should make, and since he has not explained the experiment beyond saying that *"It is about an egg and how you can observe how it is changing,"* it is difficult to imagine what kind of chart would be helpful for recording observations. This type of limited instruction continues throughout the essay. Since Ricardo is a non-native English speaker, it is difficult to know if the lack of details reflect an inability to communicate them in English, a lack of understanding of the scientific concepts, or a lack of awareness of what can be assumed to be shared knowledge between the writer and the readers.

Like Christie, Ricardo presents himself as a scientist (*"Hello I am Dr. Estevez..."*) at the beginning of his essay. He continues to develop this role throughout the essay, albeit in a much more subtle way than Christie did. He continues to interact with the reader by periodically asking *"what has happen?"* and by ending with *"And that is my presentation i hope you liked it."*

Mechanically, Ricardo's third grade English essay is relatively strong, although it does contain more errors than Christie's essay did. There are few spelling errors; the only word that is consistently mispelled is *"happen"* instead of "happened". This may be not so much a spelling problem as it is a reflection of his status as a non-native English speaker. That is, he simply may not hear the "ed" ending on "happened", and therefore may think that he is spelling the word correctly.

In general, the biggest problem with mechanics that Ricardo has is a seemingly limited understanding of sentence boundaries. Ricardo tends to have more examples of run-on sentences in his third grade English essay than Christie did. For example, *"You take a hard boiled egg and put it in the* *vinegar wait for a mомment and write the results"*. This difficulty with sentence boundaries may be related to his native Spanish speaking status, since longer sentences structures are very typical in Spanish. However, it may also be a developmental issue, as it is not uncommon for third graders to struggle with sentence segmentation.

One idiosynchracy in his third grade English writing sample that seems clearly related to his knowledge of writing in Spanish is his use of inverted question marks prior to the question, "*¿what has happen?*" He asks this question three times, and each time, he includes the inverted question mark prior to the question. So it does seem clear that Ricardo is applying his knowledge of Spanish mechanical conventions to his English writing.

In general, despite the fact that English is his second language, Ricardo's linguistic ability in English is fairly sophisticated. Any difficulties in comprehension that a monolingual English speaker may have would more likely be due to missing information than to incorrect linguistic structures. Most verbs are in the present tense, which makes sense, given that the task is to describe the steps involved in carrying out a science experiment. There are no instances of code-switching in this essay.

Ricardo's third grade Spanish essay is also a one paragraph description of a science experiment. Like his third grade English essay, this essay includes a thesis statement (*"Les quiero hablar de un experimento se trata de ver como cambia la materia."*), numbered steps to follow in order to perform the experiment, and a conclusion. Unlike his English essay, he does not establish himself as a scientist nor include a personal introduction.

As with his third grade English essay, Ricardo's third grade Spanish essay is missing many important details that would help the reader to understand how to perform the experiment. For example, he begins again by telling us to construct a table to help us record results before he tells us what the experiment entails: *"Hagamos una tabla para anotar los observaciones"*. For this reason, it seems likely that the omission of these details in the English essay was not due to second language issues, but rather, to either a lack of scientific understanding or lack of awareness of how to contextualize information for readers that do not possess shared knowledge.

This seemed to be a systematic issue in all of the third grade writing samples, regardless of the language of the essay or the dominant language of the child. It might be helpful for the teachers to ask children to exchange papers and to try to replicate the experiments based on the information presented in the essays. This may help the children to learn how to sequence information logically so that someone with no prior knowledge could follow the instructions.

Mechanically, there are several problems with this essay. As with his English essay, there are several places where he seems to have difficulty with sentence segmentation. As a result, this impacts his ability to correctly use punctuation and capitalization. For example, the last step in this essay says, *"Y devueta pon 4 cucharas de vinagre en el bircarbonate de soda y despues esperar y despues observar y anotar los resultados y esos son los pasos gracias"* ("And then put 4 spoons of vinegar in the baking soda and then wait and then observe and write down the results and those are the steps thank you"). This style of writing is very common among native Spanish speaking third graders, and seems to more indicative of difficulty distinguishing sentence boundaries than a preference for Spanish writing conventions.

No accent marks are used in this essay, which is not atypical, even for monolingual Spanish speaking students. Frequently, teachers do not begin to demand use of accent marks until the upper grades.

In general, Ricardo's use of language in this essay is good, and would be comprehensible to a monolingual Spanish speaker. He changes person a lot in his verb conjugations, and this makes it somewhat difficult to follow at times. For example, he sometimes says *"Hagamos"* ("let's make"), using the subjunctive "we" construction; other times he uses an infinitive verb form; still other times he uses the informal "you" command form, such as *"pon"* ("put").

His use of pronouns is more sophisticated than that of the other third graders, and reflects his native language ability. For example, he says, *"Les quiero hablar de un experimento..."* ("I want to talk to you about an experiment...). He is the only one who correctly uses an indirect object pronoun at this grade level.

However, despite his native language ability, he does commit some errors, mostly in agreement. For example, the title of the essay is *"Un experimento de cambios quemico y fisico"* ("An experiment about chemical and physical changes"), which fails to have the adjectives agree in number with the noun.

In his fourth grade English essay, Ricardo writes a one paragraph expository entitled *"Jamestown"*. Unlike Christie, who organized her fourth grade English essay with deductive logic, Ricardo uses inductive logic and states his thesis sentence first. *"Because of the Indians, the store house put on fire, and the mosquitos the capital Jamestown was moved by the colonists to Williamsburg."* This sentence sets him up for a very organized paragraph, in which he could write an explanatory sentence about each one of the problems that contributed to the move to Williamsburg. However, rather than doing that, Ricardo seems to focus on the first issue, the Indians, and writes the following three sentences exclusively about them. There is no real concluding sentence in the essay, although the final sentence serves to conclude the topic of the Indians. (*"The Indians and the colonists made a deal because their men were getting killed."*) For this reason, it seems possible that Ricardo intended to write a multi-paragraph expository but ran out of time before he was able to complete it.

As with his third grade essay, Ricardo seems to struggle with the issue of how much information is necessary to impart to the reader in order to aid comprehension. For example, it is difficult for an outside reader to understand what "the store house put on fire" that he mentions in the first sentence refers to. It seems likely that this was either discussed in class or mentioned in a book that he read, but it is not clear to an outside reader.

Although he does not discuss all of the problems that he mentioned in his topic sentence, Ricardo does do a relatively thorough job of explaining why problems with the Indians contributed to the colonists' decision to move to Williamsburg. In this way, his topic development of the first theme is fairly complete.

Mechanically, this essay is much better than his third grade essays. There is only one spelling error, there are no errors in capitalization, and he seems to have grasped the concept of a sentence, judging by his lack of run-on sentences in this essay. Some of his sentences are long, but they seem to reflect more of an attempt to create more complex sentence structures rather than simply stringing together many unrelated items with the connector "and then".

Linguistically, this essay is also far more advanced than either of his third grade essays. As was mentioned previously, he makes use of much more complicated sentence structures by combining multiple clauses and inverting word order at times. Additionally, there is much greater variation in his use of verb tense, as he includes verbs in the simple past, past progressive, and passive voice in this essay. This preference for the past tense in this essay makes sense, given that it is about an historical topic.

Finally, Ricardo's fourth grade Spanish essay is a multi-paragraph essay about his family. The organization is solid, as the essay contains a clear topic sentence, several supporting paragraphs, and a concluding sentence in the final paragraph.

The first paragraph contains the topic sentence, *"Todo familia esta compuesto de mi papá, mi mamá y mi hermana."* ("My whole family is made up of my dad, my mom and my sister.") In addition, some preliminary information about the family is provided in this first paragraph.

In each of the following three paragraphs, one of his family members is highlighted. What is interesting is that rather than placing the introductory sentence about the family member at the beginning of the paragraph about that person, he places it at the end of the paragraph about the previous person. For example, the second paragraph tells the reader about his mother. The last sentence of that paragraph is, *"Otro miembro de mi familia es mi papá."* ("Another member of my family is my dad.") The essay ends with a one sentence concluding paragraph, *"Y eso es todo mi familia y como son."* ("And that is my whole family and what they're like.")

In contrast to Ricardo's other three essays, the topic development of this essay is complete enough for an outside reader to understand it without additional information. This may be due to improved writing skills from third grade and more time for this writing assignment than he had for his fourth grade English essay. However, it may also be because the topic of this essay is much more familiar to Ricardo than the topics of the other three essays. That is, his greater familiarity with the topic may have allowed him to focus his energy on structuring a logical essay rather than on merely trying to understand the topic.

Ricardo's use of mechanics is also better in this essay than in any of his other essays. He definitely seems to have grasped the concept of sentence segmentation, as he writes very succint sentences with correct punctuation and capitaliztion. There is only one spelling error, and there is an increase in his use of accent marks. In this essay, he accents the words *"papá"* and *"mamá"*, but still leaves many other words without accents.

Ricardo's language use in this essay is simple but clear, and would be easily comprehensible to a monolingual Spanish speakers. There are no code switches, nor are there any instances of English grammatical patterns. That is, this essay seems very typical of a monolingual Spanish speaking student. There are a few instances in which Ricardo shows incorrect agreement between nouns and adjectives, such as *"Ella es muy gracioso"* instead of *"Ella es muy graciosa"* ("She is very funny"). For the most part, though, this essay contains very few errors, and no evidence of second language learning interfering with his continued development of native language literacy.

General trends

Despite the variety in the type of writing samples that were gathered from the children, it was still possible to notice some general trends within the four categories of analysis. It is important to look closely at these trends, as they may provide insight into the nature of the relationship between first and second language writing.

Overall, all of the essays were quite strong from an organizational standpoint. Regardless of the genre or the language, most seemed to contain a topic sentence, supporting details, and a conclusion. The fact that this structure held regardless of language seems to support the findings of both Valdés, et al. (1992) and Lanauze & Snow (1989), who found that organizational strategies that had been developed in the first language were readily available to students composing in the second language.

Moreover, there was a general trend of increasing organizational sophistication from third grade to sixth grade. In the earlier grades, each idea was typically represented by a single sentence. In some cases, children wrote multi-paragraph essays in the earlier grades, but each paragraph tended to either be a single sentence or a group of unrelated sentences. In other words, it was apparent that the concept of paragraphing was still being worked out by the third and fourth graders. In the upper grades, multi-paragraph essays became more common in both languages. Furthermore, paragraphs in the upper grades were more fully developed and more cohesive, frequently including their own topic sentences and conclusion. Even when single paragraph essays were written in the upper grades, there tended to be greater elaboration of ideas beyond a single sentence. This trend held in both English and Spanish for both native English speakers and native Spanish speakers.

Similarly, all of the essays in both English and Spanish are quite good from the standpoint of mechanics. Spelling errors are infrequent in either language, regardless of language dominance of the author. The spelling errors that do appear do not seem to reflect any pattern of phonetic confusion between the two languages.

Additionally, from the third grade, both native English speakers and native Spanish speakers seem to have a strong grasp of the areas of mechanics that overlap in both languages. That is, final punctuation at the ends of sentences, capitalization conventions, the use of commas, etc. However, there are clearly some difficulties with mechanical conventions that are specific to Spanish. For example, inverted punctuation marks at the beginnings of sentences are missing in all but a few essays. Native Spanish speakers in the upper grades are the only ones who use the inverted punctuation correctly. In addition, accent marks are frequently missing in all essays. There is definitely a trend of increasing accent mark use in the upper grades, with the native Spanish speakers being the most likely to employ them correctly. However, even among native Spanish speakers in the 5th/6th grade cohort, there is still a notable lack of accent marks. The fact that the only patterns of mechanical errors are those that apply specifically to Spanish seems to indicate that students are applying English mechanical conventions to their Spanish writing. For the most part, this is not problematic, as there is a great deal of overlap. However, it is clear from the errors that this seems to be an area where the students could benefit from some increased direct instruction.

While all student essays are generally good in the area of topic development, there is more variation from essay to essay than in the prior two categories of evaluation. This is partly because the essays cover a wide range of topics and genres, and it is therefore not surprising to see greater variation in the extent to which the topics are developed.

One of the most consistent difficulties with topic development in general is the ability to figure out what information can safely be assumed to be shared knowledge, and what information needs to be included in order for the reader to understand the essay. In general, the ability to determine this seems to have a developmental curve, with the older children being more likely to include all of the necessary information to make their essays easily comprehensible to the reader. There did not seem to be any patterns based on language dominance of the children. That is, even when writing in a second language, the children seemed increasingly cognizant of the importance of including logically ordered, detailed information in their essays.

Finally, in the domain of language use, there is a great deal of variation with regard to the ability of the children to successfully incorporate linguistic features in their writing. This is the one domain where there seem to be patterns based on age, language dominance, and the language of the writing sample.

First, as with the other categories of evaluation, there tends to be a developmental curve, with older children using more sophisticated linguistic devices in both languages than the younger children. Specifically, there is increasing complexity of sentence structures, greater variety in the number of verbs and verb tenses used, and a general increase in essay length in the upper grade writing samples.

Second, there are clearly some patterns in the area of language use based on language dominance of the children. Specifically, the native Spanish speakers on average tend to be more balanced bilinguals than the native English speakers, and are therefore likely to have more comparable quality of linguistic sophistication in their English and Spanish writing samples at each grade level. The native Spanish speakers do commit linguistic errors in their Spanish essays, but the errors tend to be more frequently related to mechanics than to lack of vocabulary or grammatical knowledge.

However, although this is a general trend, it is not always the case. There is a fifth grade Spanish writing sample of a native Spanish speaker that does contain many grammatical errors, most of which stem from her attempt to translate sentences directly from English. In this case, the performance of the native Spanish speaker more closely resembles that of the native English speakers, who frequently show evidence of using English grammatical patterns in their Spanish writing.

According to the 1993-94 evaluation of the school, there was no difference in Spanish writing test scores between native English speakers and native Spanish speakers. This seems contradictory to the findings reported here, which indicate that native Spanish speakers tend to commit fewer errors in Spanish writing than native English speakers. It is possible that the native Spanish speakers included in this study have atypically sophisticated Spanish writing skills, and that a larger sample would eliminate the differences according to language dominance found in this study.

On average, the native English speakers included in this study commit far more linguistic errors in their Spanish essays than they do in their English essays. This finding corresponds to the assessment of native English speakers' oral Spanish proficiency in the 1993-94 evaluation. That study found that in Spanish, native English speakers achieved reasonable communicative competence, although they did commit many errors. By the fifth grade, that study found that native English speakers still had less vocabulary and made more grammatical errors in Spanish than the native Spanish speakers.

Finally, Spanish essays seem to consistently contain more linguistic errors than English essays. Although native English speakrs tended to commit more errors in Spanish writing than native Spanish speakers, the native Spanish speakers did commit errors as well. This finding is similar to the assessment of oral language proficiency in the 1993-94 evaluation, which hypothesized that errors among Spanish speakers were possibly due to limited Spanish language support in the wider community.

Additionally, according to the same evaluation, the most common errors in oral Spanish are: "gender agreement between nouns and articles, gender agreement between nouns and adjectives, number agreement between subject and verb, word order (imposing English word order), and use of informal address with formal title" (Barfield & Rhodes, 1994, p. 37). As mentioned previously, with the exception of the use of informal address with formal title, these were also the most frequently occuring errors in the Spanish writing samples.

Code-switching, although it is quite rare, only occurs in the Spanish essays. No children use Spanish words in their English essays; however, there are occasions when both native English speakers and native Spanish speakers incorporate English words into their Spanish essays. This finding seems consistent with the reports on oral language use in the classrooms. The 1993-94 evaluation of the school indicates that during Spanish class time, students sometimes used an English word if they did not know the equivalent word in Spanish; however, code-switches into Spanish were never observed during English class time. The code-switches in the writing samples are always flagged by quotation marks, which seems to indicate intentionality on the part of the writer.

The English writing samples always seem to be of higher quality than the Spanish writing samples, regardless of grade level or native language of the student. In other words, despite receiving half of their academic instruction in Spanish, the English writing ability of the students in the program did not seem to be negatively affected in any way. The 1993-94 evaluation reached a similar conclusion, finding that despite receiving half as much instruction in English as mainstream kids, there was no negative impact on the English writing ability of native English speakers or native

Spanish speakers enrolled in the program. On the contrary, the evaluation concluded that it seemed to have had a positive effect, given that all classes in the two-way bilingual program scored higher than non-immersion classes on the county-wide assessment of English writing.

CONCLUSION

Returning to the three research questions posed in the introduction of this study, it is clear that there are some very definite relationships between first and second language writing. Specifically, students tend to apply the information that they have regarding writing in their first language to writing situations in the second language. This knowledge transfers more readily to some aspects of writing than others. For example, many organizational strategies, aspects of topic development, and mechanical conventions are the same in both languages. Therefore, despite limited second language proficiency in many cases, the children were still able to write relatively sophisticated essays by relying on their knowledge of these common aspects of good writing.

The second research question asked if the relationship between first and second language writing ability differed for native English speakers vs. native Spanish speakers. Based on the writing samples analyzed in this study, it appears that the relationship does differ according to language dominance. Perhaps because they live in an English speaking society, the native Spanish speakers tend to be more balanced bilinguals than the native English speakers. As a result, the disparities between their English essays and their Spanish essays were not as great as was the case for the native English speakers. That is, native English speakers tended to commit more errors when writing in Spanish than native Spanish speakers did when writing in

English. Specifically, there were very few instances of Spanish grammatical patterns appearing in English writing samples, while it was not infrequent to find English grammatical patterns in the Spanish writing samples. Furthermore, most instances of Spanish writing conventions appearing in English essays were produced by native Spanish speakers in the lower grade levels, i.e. students that were more Spanish dominant. This suggests that increasing levels of bilingualism allow for more flexibility in terms of writing strategies that a person may choose to employ while writing in their first and second language. At low levels of bilingualism, students seem more dependent upon native language writing strategies, and may employ a uniform procedure for all writing tasks, regardless of language. However, with increased fluency in the second language, it is possible that a student's approach to writing in that language becomes more specialized and divergent from their approach to native language writing.

The fact that some native Spanish speakers used English grammatical patterns in their Spanish writing may be due to their length of residence in the United States, and may indicate English dominance despite native Spanish ability. For this reason, it may be more helpful to focus more on language dominance than native language if this study were to be replicated in the future.

Finally, the third research question asked whether there were developmental patterns in the relationship between first and second language writing ability. Again, based on the results of this study, there does seem to be some evidence for developmental patterns. In general, writing in both languages seemed to increase in sophistication at upper grade levels. This is an important finding, as this is the first study that has attempted to track continued native language literacy development concurrently with second language literacy development. Additionally, the differences in writing ability between first and second language writers in both languages tended to diminish at the upper grade levels, although they were still very present. The gap between first and second language writers in English seemed less than that between first and second language writers in Spanish. This is probably due to the fact that English is the language of the wider society, and as a result, the native Spanish speakers receive far more exposure to English than the native English speakers do to Spanish.

If this study were to be replicated in the future, it would be helpful to combine the evaluation of the writing products with an ethnographic study of the writing process that the children employ when writing in their first and second languages. Such a study would be more comprehensive and would likely yield more complete information regarding the relationship between first and second language writing ability. As the popularity of two-way bilingual programs continues to grow in this country, this question will be of increasing interest to educators.

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Attachment A

RUBRIC FOR ASSESSMENT OF WRITING
ELEMENTARY SCHOOLS

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8 - 7

The writing demonstrates careful attention to the total effect of the piece. The thesis clearly gives the topic and the writer's point of view. The writer develops the topic by choosing related supporting details, arranging the details in the most appropriate organization, using a variety of sentence patterns, and choosing vocabulary thoughtfully. The mechanics of the piece contribute to the whole of the work. The writer demonstrates that audience understanding and interest are essential goals in writing. Relationships are clearly stated to ensure understanding. The writer strives for an original, creative, and honest approach. Language is used well with attention to flow, rhythm, and emphasis. The writing has clarity and style and is enjoyable to read.

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6 - 5

Papers in this category show thought about the subject. The topic is clearly stated in a thesis, and the topic is supported with well-chosen evidence. The piece has no flaw glaring enough to detract from the sense of the writing. The writer uses mechanics competently. However, the writer takes no risks and primarily uses a formula for organization. In some cases, the choice of subject is unimaginative, lending itself to only the most general written discussion. There is little or no attention to the power of language, and the writer relies on simple relationships and explanations to develop the topic. The writer does not demonstrate an understanding of the total effect of a piece of writing. The writing has clarity and communicates to a reader.

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4 - 3

The writing shows an honest attempt to address a topic. However, the writer does not actually develop the topic. Supporting details are chosen randomly with some being irrelevant. The writer has a minimum of organization and often neglects to include either a thesis or conclusion. The thinking exhibited in the piece of writing is superficial so that full explanation of the topic does not occur. The writing is often stream of consciousness and egocentric with no awareness of audience. The mechanics detract from the total effectiveness and serve to cloud meaning. Occasionally, the writing may be fairly articulate, but a major flaw in thinking or usage prevents the piece from being successful. The writing has minimal clarity and presents difficulty to a reader.

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2 - 1

The writer does not narrow the topic or does not seem to understand the topic. The piece may be underdeveloped or undeveloped, but in either case, the writing is totally lacking in clarity. The piece does not include specific details that would make the writer understood, and the writer does not demonstrate organizational ability. Awareness of audience is not evident so that communication is the reader's responsibility. Inhibiting communication further is the writer's inability to use mechanics correctly. Some papers demonstrate that the writer has thought about the topic but does not have the facility with language to communicate that thinking. The writing is incoherent due to major difficulties with written expression.

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Attachment B

Evaluation categories used for this study

1) organization

*title
*use of paragraphs
*topic sentence
*conclusion
*general organization/ordering of information

2) content/topic development

*details
*cohesion
*audience awareness
*originality/creativity

3) mechanics

*spelling
*punctuation
*capitalization

Spanish only

*accent marks and tildes

4) language

*code switches
*comprehensibility to (monolingual) native speaker
*variety and correctness of grammatical structures
*variety and appropriate use of verbs/verb tenses (as index of vocabulary)

CHARACTERISTICS FOR COMPARISON ACROSS PROGRAMS

1 - **Parent involvement.** In the three case studies, engaging parents' and community support and active participation appears to be a central component for the program's inception, maintenance and success. The presence of parents as volunteers or teacher aides is prevalent. More importantly, in the three schools there are committees with advisory or decision-making functions which have a direct bearing on the survival and growth of the program.

2 - **Readiness to modifiy the program.** All three programs are constantly evolving and do not stubbornly adhere to a fixed paradigm. This flexibility to respond to new conditions and progressively incorporate lessons learned from their successes and failures has allowed the programs to make major and minor adaptations on an ongoing basis. For example, the program at Key has become a school-wide program, and Inter-American has tranformed itself from a 50-50 to an 80-20 model over the years. On a smaller scale, River Glen uses interventions to help lower-level readers, while Key has integrated students from the ESOL/HILT program into Spanish math and reading classes. This willingness to adapt can also be a motivating factor for teachers, because there is room for innovations and creative ideas.

3 - **Personnel qualifications and professional development.** The faculty and staff at all three schools are very dedicated professionals who constantly strive to provide high quality education. Professional development is a high priority in all three schools. In-service training is ongoing at all three schools. Inter-American is outstanding for its system of mentoring new teachers and for the autonomy given to teachers in deciding how best to develop themselves professionally. At River Glen, teacher training emphasizes teaching methodology and articulation of issues across grade levels. Further, the principal observes new teachers and works with them to improve their two-way immersion teaching strategies. All three schools organize teachers into teams for sharing instructional materials and implementing curriculum changes.

There are some differences among the programs with regard to the teachers' qualifications. Inter-American has the benefit of a fully bilingual teaching staff; most of the teachers at River Glen are bilingual; and at Key, most English section teachers do not know more than a few words or phrases in Spanish.

4 - **Balance in class composition and heterogeneous grouping for classroom activities.** All three programs aim at balancing the numbers of Spanish language background and English language background students in each classroom. On the basis of this class composition, teachers apply cooperative instructional practices for students of different language backgrounds to have plenty of opportunites to interact with each other. Heterogeneous groups are formed and cooperative, interactive learning activities are carried out in the majority of the classrooms observed.

5 - Bilingual environment and separation of languages. The following are components of the language environment at school and have been examined comparatively at the three observation sites: classroom displays, conversations with administrative and library personnel, and announcements over the loudspeakers. The three programs operate on the basic premise that the languages of immersion should be kept separate for instruction. Teachers do not normally use English and Spanish concurrrently or consecutively in their classes. There is wide variation in the implementation of this adherence to the separation of the two languages. River Glen seems to favor the strictest separation of languages and, consistent with its time ratio for each language, school announcements over the P.A. are made in Spanish. At Key announcements from the administrative offices are generally made in English, regardless of whether it is the Spanish or the English time of the day. The Pledge of Allegiance and dismissal of buses, however, are announced in both languages. (Note: Key's program was still a strand within a school at this time.) Inter-American is the least strict in separation of languages since posters in the same classroom are in either language and students are often allowed to express themselves in English during Spanish time. Announcements over the P.A. are often in both languages. A lack of Spanish language texts occasionally led to textbooks in English being used for lessons in Spanish, as was the case in sixth grade of the program in Arlington, VA, and some classes at Inter-American.

6 - Initial literacy. Differences are greatest with regard to the choice of language for early reading instruction. Students at Key start reading in English and Spanish simultaneously. River Glen starts everyone reading in Spanish and delays reading instruction in English until third grade. Inter-American separates Spanish language background from English language background children for language arts instruction in both languages. How these differences eventually translate into later reading achievement has not yet been examined .

7 - Content area allocation for each language. With regard to this aspect, the combination of the specific characteristics of each program results in some marked differences between them. Besides English and Spanish language arts classes, which are found in all three programs, Social Studies is taught in both languages at River Glen and Inter-American. Key, on the other hand, teaches Social Studies in English in all grades. This is interesting considering the nature and range of grammatical constructions, verb tenses and vocabulary used in a Social Studies lesson, and considering their potential transfer for use in other communicative situations. Other areas, such as P.E., Art, and Music are taught in either language at River Glen and Inter-American depending on the grades of the availability of instructors. In contrast, they are always taught in English at Key. Math is taught in Spanish in all three programs, though not exclusively in Spanish at River Glen and Inter-American. For the purposes of taking standardized tests, students are especially prepared to carry out the problem-solving activities in English. Finally, Key stands out for (a) keeping the language separation by time and by subject consistent throughout the grades, and (b) choosing sets of subjects for each language of immersion which call for somewhat different linguistic structures and academic discourse: Math, Science, and Health are taught in Spanish, while Social Studies, P.E., Arts, and Music are taught in English.

8 - Time allocation for each language and admission of newcomers. River Glen and Inter-American are closer to each other with regard to these feature. Both start at a high percentage of instructional time in Spanish and reduce it to 50% in the upper grades, while Key keeps the balance between Spanish and English at a steady 50% each. Consideration of this difference, in the light of the good language achievement levels by students in all three programs, must be made along with their respective admission policies. Key places late-comers in their HILT program while River Glen and Inter-American incorporate them into the immersion program. Thus, the screening method at Key works to make up for the less time dedicated to the minority language in comparison to the time dedicated to it at Inter-American and River Glen. Although the latter schools start with 90% or 80% of the time for Spanish instruction, they need to accommodate students with little or no knowledge of Spanish who want to join the program in the intermediate or upper grades.